The Mining Journal
RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 685.—Vol. XVIII. LONDON, SATURDAY, OCTOBER 7, 1848. [Price 6d.

VALUABLE MINING MATERIALS FOR SALE.

MESSRS. TREVENA & PRYOR have received instructions to OFFER FOR SALE, BY PUBLIC AUCTION, on Tuesday, the 17th inst., and following day, at WHEAL ANDREW AND NANGILES MINES, situate in the parishes of GWENNAP and KEA, the following valuable assortment of

MINING MATERIALS—CONSISTING OF

A 70-inch cylinder STEAM-ENGINE, with two boilers, weighing about 22 tons, and the outer connecting-caps and first piece of rod—complete.
Balance-bob, capstan and shears, 120 fms. 13-inch capstan rope, and cat-head.
1 9-feet 20-inch pump; 26 9-feet and 1 4-feet 16-inch ditto; 8 9-feet 15-inch ditto; 37 9-feet and 1 3-feet 14-inch ditto; 5 9-feet and 1 6-feet 13-inch ditto; 8 9-ft. 12-inch ditto; 10 9-feet and 1 6-feet 10-inch ditto; and 6 9-feet 9-inch ditto.
1 17-inch H and top-doorpieces and windbore; 2 16-inch ditto; 2 15-inch ditto.
1 8-inch kneepiece.
1 10-feet 9-inch and 1 10-feet 12-inch working barrels.
1 10-inch and 1 13-inch clack-seatpieces and doors; 1 10-inch and 1 13-in. windbores.
1 19-inch, 2 15-inch, 1 14-inch, and 1 9-inch plunger-poles, 10 feet long each, with stuffing-boxes and glands to match them.
About 100 fathoms 12-inch and 13-inch connection-rods.
22 pairs faggotted iron strapping plates, 16 feet long each and 7 inches wide.
3 pairs ditto ditto, 19 ft. long each and 6 inches wide.
A large quantity of rods and flanch-bolts, staples and glands, and iron bucket-rods.
About 1700 lbs. brass clackseats and valves.
1 4-head STAMPING-MILL, with wheel, 24 feet diameter and 2½ feet wide.
1 6-head ditto with ditto, 18 feet diameter and 4 feet wide.
BURNING-HOUSE, with frames, kieves, &c., complete.
Several horse-whims, whim-kibbles, chain, ropes, &c.
A BOILER, 34 feet long, with tube, 3 feet 10 inches diameter.
Several tons of old CAST and WROUGHT IRON.
2 smiths' bellows, 2 anvils, vice, and iron horse, smiths, miners, and carpenters' tools, carpenter's bench, 200 fathoms ladders, and 140 fathoms wood air-pipes, large and small iron scales and weights, several fathoms launders, of different sizes, miner's dial, quadrant, and spirit level, together with a great variety of other articles, too numerous to be specified.

The articles are in excellent condition, and will be found well worthy the notice of parties connected with mines.

The sale will commence precisely at Eleven o'clock on each day.

Dated Wheal Andrew and Nangiles, Oct. 3, 1848.

STEAM-ENGINE AND MINE MATERIALS FOR SALE.—FOR SALE, BY PRIVATE CONTRACT, at VENTONGIMPS MINE, in the parish of FERRANZABULOE, the following

MATERIALS—VIZ.:

A 50-inch cylinder STEAM-ENGINE, in excellent condition, with wood work, first piece of rod, and boiler, 13 tons.

17, 16, 15, 12, and 11-inch pumps.	17, 15, and 11-inch working-pieces.
15, 12, and 11-inch doorpieces.	3 16-inch plunger-poles.
17, 16, 15, 13, and 10-inch windbores.	3 Pieces of 12-inch rods.

Shears, horse-whim, ladders, kibbles, 36 and 42-inch smith's bellows, and a variety of other useful articles.

For viewing the same, apply to William May, on the mine; and for further particulars, to I. I. Iselin, Esq., 14, George-street, Mansion-house, London; or to Mr. Thomas Blankinsop, St. Agnes.—Dated St. Agnes, Sept. 9, 1848.

FLINTSHIRE.—TO BE SOLD, BY AUCTION, on Thursday, the 26th day of October next, at Three o'clock in the afternoon, at the Ship Inn, in FLINT, in the county of Flint (unless in the meantime disposed of by private treaty, of which due notice will be given), subject to conditions to be then and there produced, all those FREEHOLD LEAD and ALKALI WORKS, situated at Flint, aforesaid.

The LEAD WORKS contain smelting furnaces, slag hearths, refineries, crushing-mills, red lead ovens, with grinding apparatus for eight ovens, &c., and one of the finest rolling-mills in the kingdom, nearly new, with width of rolls of 9 ft. 2 in.; three steam-engines stand on the premises, which have also the advantage of water-power, by means of a reservoir, supplied by a large stream of water, working two wheels.

The ALKALI WORKS consist of lead chambers, furnaces, vats and pans, &c., complete, and are adapted for the manufacture of 30 tons of soda ash per week.

The whole premises, which are freehold of inheritance, embrace about 8 acres of land, and stand on one of the deepest points of the River Dee, where vessels of large size can lie in safety; and, by means of a wharf and crane, can be laden and unladen with the greatest facility.

Coal is brought to the doors of the furnaces, by a railway from adjacent collieries.

A good turnpike-road, and the Chester and Holyhead Railway, run through the property—the latter having a station at a distance of about 200 yards; and altogether, the situation of the premises cannot be surpassed, and stands unequalled for the beneficially carrying on of a great and extensive business.

The recent expiration of Mr. Pattinson's patent, for the desilverising of lead, affords great advantage, and makes the present a valuable opportunity for the profitable investment of capital.

The foregoing premises formed the well-known and long-established works of the late firm of George Roskell and Co.—late deaths of proprietors have rendered it necessary to have the same disposed of.

A good house, with spacious offices, stands on the premises.

For all further particulars, or to treat, apply to Geo. Potts Roskell, Esq., Stockyn, Holywell, Flintshire; Mr. Williamson, solicitor, Holywell; or to Mr. Wm. Williamson, solicitor, Holywell.—Holywell, Sept., 1848.

COAL.—TO BE SOLD, OR LET, a valuable COAL MINE, the property of Sir Thomas G. Heaketh, Bart., situate about five miles from the important manufacturing town of BLACKBURN, in the township of Great Harwood, in the county of Lancaster. The mine has been recently proved, and found, at 77 yards from the surface, to be 5 feet in thickness, and of excellent quality. It is commonly called, or known by the name of, the UPPER MOUNTAIN MINE, and extends over about 1000 statute acres, which will be divided into suitable lots.

A section of the borings may be seen by applying to Mr. Boosie, Rufford Hall, Ormskirk; or to Mr. Whittle, coal viewer, Charnock Richard, Chorley—to either of whom proposals may be sent.

GLAMORGANSHIRE.—TO BE SOLD, BY PRIVATE CONTRACT, with immediate possession, the MORRISTON FOUNDRY, and the PLANT, MACHINERY, and TENANTS' FIXTURES, and MANAGER'S HOUSE, GARDEN, and about FIVE ACRES of LAND, belonging thereto—situate about three miles from SWANSEA, on the Swansea Canal, and within a mile of the lines of the South Wales and Swansea Valley Railways, which are now in course of construction.

The WORKSHOPS are commodious, and well started with all requisite machinery, &c., for immediately resuming business, and the premises are admirably adapted for the manufacture of railway engines and carriages.

For further particulars, and to treat, apply to Messrs. Llewellyn and Randall, solicitors, Neath; Mr. W. P. Struvé, C.E., Swansea; or Mr. Robert Clover, Manchester.

PEMBROKESHIRE.—STEAM-ENGINES, PUMPS, AND WAGGONS.—FOR SALE, BY PRIVATE CONTRACT, 1 40-inch cylinder, double acting, CONDENSING ENGINE, with two boilers (about 6 tons each), 54 fms. of pumps, 12-inch plunger-pole and case, working barrel, and clackpieces; also pump-rods, capstan, shear legs, and all necessary fittings to make the lift complete; 1 20-inch WINDING-ENGINE, with boiler, two drum-barrels, 300 to 350 fathoms of chain, and pit pulleys, friction rollers, &c.; also 12 IRON, and 4 WOODEN, RAILWAY WAGGONS—calculated to carry upwards of 30 cwts. each.

The engines are situated at the Broadmoor Colliery, within four miles of the Saundersfoot Harbour, and are fit for immediate use; and, never having been worked to their full power, are in excellent condition, and are only now offered for sale in consequence of the working being discontinued.

Apply to Messrs. Lewis and James Wilson, Creswell, near Cresselly, Pembrokeshire.

CWMSTRELLYN SLATE COMPANY.

Capital £10,000, in shares of £10 each—1000 shares. Deposit £5 per share.

The responsibility of shareholders is limited to the amount of their shares.

The slate trade in North Wales has, in nine cases out of ten, been found a safe and lucrative speculation for the investment of capital, through whose agency—whether emanating from conjoint or individual enterprise—the inexhaustible mineral treasures of apparently barren masses of rock and mountain ranges have been explored and turned to the account of the courageous adventurers. In this way fortunes have been made in the course of a few years—whereas the risk is small—the outlay being comparatively trifling in proportion to the extent of contributors.

From the margin of Cwmstrellyn Lake rises an immense slate rock, or, properly speaking, slate bed. With the view of testing the properties of this slaty formation, openings have been made, from which the most satisfactory results have ensued—proving to a certainty the existence of slate, of excellent quality and colour.

The reports of the engineers sent to view the place, confirm the expectations raised by the success which has attended the experiments.

It is proposed, therefore, to form a company, and raise sufficient funds for working Cwmstrellyn Slate Quarry. Favourable terms can be obtained from the proprietor—viz., a lease, for the full term of 60 years, with a royalty of 1th, to commence at the expiration of six years' working, on payment of £1000, or a royalty of 1-12th, after the quarry shall have been working three years, on payment of £500, at the option of the company.

The advantages are—ample space on the spot—from 20 to 30 acres, if required—for the deposit of waste, immense water-power for the working machinery, and easy access to the shipping port of Portmadoc, distant six miles. By opening a communication with the public road (three miles from the quarry), the facilities of a tramroad would be rendered available.

Any further particulars that may suggest themselves to persons disposed to take shares in the above company, can be had on application personally, or by letter, to R. M. Griffith, Esq., Bangor, North Wales, at whose office the engineer's report and surveyor's plan may be seen.

BRITISH SOUTHERN WHALE FISHERIES.
PROSPECTUS.

It is proposed—1. That a company be formed for re-establishing the British Southern Whale Fisheries, by prosecuting them from the Auckland Islands, under the title of the British Southern Whale Fishery Company.

2. That the capital of the said company be £300,000, in 6000 shares of £50 each, which capital will be sufficient for the equipment of 30 ships, the least number with which operations should be commenced, and for all other expenses, until returns began to be received, and that power be given to augment it to an amount to be defined by the Board of Trade.

3. That when one-third of the required capital is subscribed, a board of not less than 12 directors be appointed from amongst the shareholders.

4. That the deposit be £1 10s. per share, and that this be paid at such time and place as the board of directors, when appointed, shall name.

5. That those who may record their names as shareholders be subjected to no liability until the foregoing preliminaries are fulfilled, and then only to the extent of their several subscriptions, as will be stipulated by the charter already promised.

6. That a Deed of Settlement, to be approved by the President of the Board of Trade, be afterwards executed by the shareholders.

7. That the instalments on the shares be called for by the board of directors as circumstances may require.

Messrs. C. H. and G. Enderby, who are the Crown grantees of the Auckland Islands, have constituted themselves a provisional committee to receive and grant applications for shares, until the board of directors enter on their functions.

All communications and inquiries, with reference to the project, may be addressed to Messrs. Enderby, or to Mr. Preston, whom they have authorised to act provisionally as secretary in the matter, and who will be prepared to furnish all necessary information, as also forms of application for shares, at the temporary offices, 8, Crosby-square, Bishopsgate, where attendance will be given daily from 10 till 5 o'clock. Applications for shares may also be made through Messrs. Tatham, Upton, Johnson, and Co., solicitors, 20, Austinfriars.

IRISH AMELIORATION SOCIETY.
IN COURSE OF BEING INCORPORATED BY ROYAL CHARTER.

Capital £500,000.

The Right Hon. LORD DE MAULEY, Chairman.

Major-General DUNCAN M'LEOD, Chairman of Committee of Works.

OFFICES—2, WATERLOO-PLACE, PALL-MALL, and 6, KING WILLIAM-STREET, CITY.

For the employment of the peasantry in the preparation (by a simple patented process, the exclusive property of the society), of PEAT, FUEL, and CHARCOAL, for Metallurgical, Manufacturing, Agricultural, and Sanitory purposes—ensuring large profits to the shareholders; and, by removing the peat, rendering the land fit for immediate cultivation.

Applicants for shares will not become liable, under any circumstances, for more than the amount of shares they may agree to take, as they will not be required to sign any deed until the charter shall have been granted—so limiting their liability; and nothing will be required, beyond 1s. per share, until the first station shall have proved the undertaking successful.

JAMES BLAKE, Secretary.

VALENTIA SLAB COMPANY.
INCORPORATED BY ROYAL CHARTER.

Capital £100,000, in shares of £10 each, and the responsibility of shareholders strictly limited to the amount of their shares.

This company has been recently incorporated, for the purpose of SUPPLYING the great and still increasing demand for SLATE SLABS, now used for a vast variety of purposes. The company's quarries and saw-mills are situate in the island of Valentia, on the south-west coast of Ireland; and the very superior quality of the slate, for sawing into slabs, has been abundantly established.

The company have just completed the uncoverings, new machinery, and other requisite works, for economical production, on an extensive scale, and have expended, in such works and improvements, and in the purchase of the property and plans of the late proprietors, the sum of nearly £40,000, raised by the issue of 8000 of the 10,000 shares, constituting the charter capital of the company, on which £5 per share has been called up.

For stock in hand, stores, and cash capital, the company require, in addition, from £6000 to £10,000, which it is proposed to raise by the issue, at par, of the remaining 2000 shares.—Estimates, based on the past working, show the most liberal return on the capital to be employed.

For prospectuses, with forms of application for the remaining shares, apply to Messrs. Palmer and Nettleship, 4, Trafalgar-square, London.

SOUTH AUSTRALIA—ADELAIDE CITY AND PORT RAILWAY.

Capital £30,000, in 1500 shares, of £20 each.

Provisionally Registered.—Statutory Deposit 2s. per share.

DIRECTORS.

GEORGE BOVILL, Esq., Millwall, Poplar.
R. BUCHANAN DUNLOP, Esq., Wandsworth.
ALFRED HILL, Esq., Chalcotts, Hampstead.
E. HUNT, Esq., Great Winchester-street, London.
H. WALTER PARKER, Esq., Highgate.
R. TORRENS, Esq., formerly Chairman of Colonisation Commission for South Australia.

BANKERS—Messrs. Barnett, Hoares, and Co.

Prospectuses and forms of application for shares (which will be allotted on the 9th October) may be obtained of the honorary secretary,

H. T. RYDE,
34, Broad-street-buildings, London.

NEW ATMOSPHERIC RAILWAY.—NO LONGITUDINAL VALVE.—The CYLINDER may be constructed of CAST-IRON TUBES, of any convenient length—like the mains of gas or water pipes. Here an immense saving of expense will be at once effected.

These TUBES can be UNITED TOGETHER, perfectly air-tight, and a piston can be constructed to work therein—air-tight also. This accomplished, the inventor engages to preserve, for a motive-power, as perfect a vacuum as can be made; and he further engages to communicate this power, with little or no loss, from the inside of the cylinder to the outside, for the PROPULSION of RAILWAY CARRIAGES, and the rails now used will answer well.—CAPITALISTS' ATTENTION IS CALLED TO THE ABOVE.

No attention will be given to communications, except made through some London solicitor, of known standing in the profession.

*** Address "O. L. Z.," Post-office, Battersea, near London.

NEW ATMOSPHERIC APPARATUS, OR RAILWAY.
NO LONGITUDINAL VALVE.

The CYLINDER may be constructed of CAST-IRON TUBES, of any convenient length—like the mains of gas or water pipes. Here an immense saving of expense will be at once effected.

These TUBES can be UNITED TOGETHER, perfectly air-tight, and a piston can be constructed to work therein—air-tight also. This accomplished, the inventor engages to preserve, for a motive-power, as perfect a vacuum as can be made; and he further engages to communicate this power, with little or no loss, from the inside of the cylinder to the outside, for the several purposes the same may be applied to—as for the PROPULSION of RAILWAY CARRIAGES—for the raising of water to heights not limited by atmospheric pressure—and, indeed, the APPARATUS will be FOUND AVAILABLE for very many other purposes.—CAPITALISTS' ATTENTION IS CALLED TO THE ABOVE.

No attention will be given to communications, except made through some London solicitor, of known standing in the profession.

*** Address "O. L. Z.," Post-office, Battersea, near London.

RIDER'S RAILWAY BRIDGE.—TO RAILWAY COMPANIES.—This BRIDGE has now been for 18 months in DAILY USE (having a double track) on the HARLEM RAILWAY, in the State of New York, United States. The Erie Railway and the Newhaven Railway Companies have likewise adopted it.

Several other bridges, for ordinary purposes, are also being constructed.

The advantages of this over all other iron bridges hitherto invented, consist in the small amount of iron required, compared with the strength obtained, in avoiding the use of any surplus weight of material, in the consequent economy of its construction, and also from its lightness, easy mode of putting together, and facility of transport, in its peculiar adaptation for foreign use.

As regards economy, it can be erected at a cost not exceeding that of a WOODEN BRIDGE, of equal capability.

Applications to be made to Mr. Moulton, the patentee, Bradford, Wilts.

TIMBER PRESERVING COMPANY.—(PAYNE'S PATENTS FOR THE PRESERVATION OF TIMBER AGAINST DRY ROT, FIRE, RAVAGES OF WORMS, &c.

The above company are ready to ENTER into ARRANGEMENTS for the PREPARATION OF TIMBER, at any of their under-mentioned stations—viz.:

Whitehall Wharf, Westminster	Barnstaple	Guildford
Fleetwood-on-Wyre	Leicester	Southampton
Wisbeach	Lynn	Hartlepool
Gateshead	Staines	Darlington

And they will erect the necessary apparatus, wherever there is a considerable quantity of timber to be prepared.—Further particulars, with prices, may be obtained at the London Works, Whitehall Wharf, Cannon-row, Westminster.

THE BRITHDIR COLLIERY, NEWPORT, Monmouthshire, is now in regular WORK, and capable of SUPPLYING from ONE HUNDRED to TWO HUNDRED TONS of COAL PER DAY. The coal is *free* from *stone, slate,* or *sulphur*; is a most excellent house coal—makes a very *superior coke,* and, for *smithies* and *forges,* considered to be the *best* in the port.

Price of large coal	8s. 6d.	per ton, on board.
Brush	8 0	
Small	6 0	

Payment by approved bills, at two months from date of shipment, or 2 per cent. for cash.—Address Mr. Buckland, agent to the Brithdir Coal Co., Newport, Monmouthshire.

TO MINERS AND OTHERS WISHING TO PROCEED TO CALIFORNIA FOR PORT SAN FRANCISCO.—To SAIL from CARDIFF, about the 10th October, the fine American barque *SUPERIOR,* Captain Le Roy—700 tons register—having fine steerage accommodation, affords an eligible opportunity for persons wishing to proceed to that part of the United States.

Apply to the captain, on board.

WANTED, A SITUATION, AT HOME OR ABROAD—A SURVEYOR, who has had considerable experience, both as land and mineral engineer, has for the last 18 months been engaged on the South Wales Railway. References and testimonials can be given.—Address "C. E.," Post-office, Swansea.

TO RAILWAY DIRECTORS, ENGINEERS, AND ARCHITECTS.—TO BE SOLD, BY PRIVATE CONTRACT, ONE HUNDRED and FORTY CAST-IRON COLUMNS, with granite plinths—forming the whole of the COLONNADE of the REGENT-STREET QUADRANT. The columns are of the Roman Doric order, 16 ft. 2 in. high, exclusive of the granite plinths, which are 1 ft. 6 in. high; it is considered they are well calculated for a railway station or a viaduct. They are also applicable for many purposes on a gentleman's estate.—Particulars may be obtained at the office of Mr. Kelk, the contractor, 13, South-street, Grosvenor-square.

TO CANAL PROPRIETORS, AGRICULTURISTS, AND COLONISTS.—FOR SALE, a LOCOMOTIVE TUBULAR BOILER, with double cylinder ENGINE, with PATENT GEARING, for working a continuous line of wire-rope for canal haulage and ploughing, and fitted for thrashing, pumping, mill-work, &c.—one of a pair. Can be seen at work at Mr. Tyler's farm, half a mile north of the Stratford Station, Eastern Counties line.—Apply to John T. Osborn, 10, King-street, St. James's, or to Messrs. A. Denoon and Co., Adam's-court, Old Broad-street, City.

IMPORTANT TO PARTIES HAVING A KNOWLEDGE OF STREAM TIN.—A VERY PROMISING SPECULATION.

TO BE SOLD, BY PRIVATE CONTRACT, the MACHINERY, standing in working order, and MATERIALS of BORINGDON STREAM-WORKS, together with the LEASE, which is held for 21 years—19 of which are now unexpired.

The above works are situated in a marsh, on the east side of, and adjoining, the River Plym, in the parish of Plympton St. Mary, Devon, and near the foot of Dartmoor, and possessing the great advantage of sufficient water-power for all purposes, and would not be disposed of, but for a disagreement among the adventurers as to the mode of working.

Application to be made to Mr. Robert Wade, 2, Frankfort-street, Plymouth; or to Capt. Thomas Martin, West Hoe Villa, Plymouth, who will show samples, which have been assayed, containing 69 per cent. of tin.

Plymouth, Sept. 23, 1848.

IMPROVED REGISTERED WATER-VALVE, OR AIR-TRAP.—This is an IMPROVED TRAP for SINKS, DRAINS, &c., by which the escape of pestilential effluvia is successfully prevented; and the choking by dirt, tea-leaves, potato-peelings, and other evils inherent in the common bell-trap entirely avoided.

May be seen, and every information obtained, on application to Messrs. Bensusan and Hassan, 37, Fenchurch-street, London.

TO BE LET (or a PARTNER of experience taken in), an established COLLIERY and IRONSTONE WORKS, in STAFFORDSHIRE.—The IRONSTONES are the CHALKY, BLACKSTONE, BASSY, or BED MINE, and the CANEL MINE, of the most superior quality.—The COALS are, Great-Row, Canel-Row, Eight-Foot, Ten-Foot Peacock, and Bassy Mines, measuring 27 feet—all within 50 yards of the surface. The estate is near 70 acres, in a ring fence, on good roads, and within ¼ mile of a canal and a railway. From £10 to £15, in cash, have been taken on the pit bank per day.—For particulars apply (post-paid, with real name and address, as none but principals will be replied to) to "J. Y. G.," at the office of the *Mining Journal,* 26, Fleet-street, London.

MINING INVESTMENT.—Mr. R. THOMAS, of No. 8 GEORGE-YARD, LOMBARD-STREET, LONDON (who has had upwards of 20 years' experience as a mining agent in London), having made arrangements to resume PURCHASING and SELLING MINE and OTHER SHARES ON COMMISSION, begs to OFFER his SERVICES to his FRIENDS, CAPITALISTS, and OTHERS, in the TRANSACTION of such BUSINESS. The unprecedented low price of mine shares renders the present a most favourable period for investment, with the prospect of large returns.—The fullest information (without charge) will be given relative to mining operations and investments; and a survey, or inspection, if required, of any mining property will be made by a competent party, on moderate terms.

MINING OFFICES—Established Five Years.—THOMAS P. THOMAS begs to inform his friends and the public, that he has REMOVED from No. 18, Threadneedle-street, to No. 3, GEORGE-YARD, LOMBARD-STREET, LONDON (late Messrs. Phillips and Tiplady's).

N.B.—Dealer in English and Foreign Funds, Mining, Railway, Gas, and other shares.

MR. R. TREDINNICK, THREE KING'S COURT, *LOMBARD-STREET, LONDON,*

Continues to DEAL in every description of MINING, RAILWAY, BANKING, INSURANCE, CANAL, and OTHER SHARES.—Statistical information afforded gratuitously upon personal application.—MONEY ADVANCED upon the above securities.

JAMES LANE, MINING SHARE DEALER, 80, *OLD BROAD-STREET, LONDON.*

WILSON & FRASER, 2, WELLINGTON-BUILDINGS, LIVERPOOL, and 13, EXCHANGE-PLACE, GLASGOW, have always ON SALE PIG-IRON, BAR-IRON, RAILWAY CHAIRS, and RAILWAY BARS.

MONEY.—MESSRS. KILLICK & CO. (late Winstanley, Killick, & Co.), SHAREBROKERS, inform their friends and the public, they make IMMEDIATE ADVANCES, to any amount, on the deposit of English and Foreign Railway Shares, Scrip, and Debentures, upon exceedingly advantageous terms: they also BUY and SELL every description of STOCK and MINING SHARES, at much less commission than usually charged.—6, Bank Chambers, opposite Bank of England.

ASTURIAN MINING COMPANY.—Notice is hereby given, that the directors of this company will meet at their offices on Friday next, the 13th day of October, and proceed to FORFEIT EVERY SHARE in this company on which the CALLS, due on the 1st of July and the 1st of August last, shall NOT HAVE BEEN previously PAID, with INTEREST, and declare the same absolutely forfeited, agreeably to the regulations of the company.

By order of the board,

Offices of the Company, 9, Austinfriars, Oct. 6, 1848. K. MACKENZIE, Sec.

IMPERIAL BRAZILIAN MINING ASSOCIATION, Winchester-house, Broad-street, London, Oct. 2, 1848.—The TRANSFER BOOKS will CLOSE on Saturday, the 14th inst., and RE-OPEN on the day after the general meeting in November, of which due notice will be given.

GEORGE THOMAS, *Acting Director.*

RHOSWIDDOL AND BACHEIDDON LEAD MINES.—Notice is hereby given, that the BI-MONTHLY MEETING of the shareholders in these mines will be HELD at their offices, No. 8, Old Jewry, on Tuesday next, the 10th inst., at half-past Eleven o'clock.

GEO. HADLEY, Purser.

TAMAR SILVER-LEAD MINING COMPANY.—Notice is hereby given, that the ANNUAL GENERAL MEETING of the shareholders of this company will be HELD at 44, Finsbury-square, on Thursday, the 26th day of October next, at Two o'clock precisely.—London, Sept. 28, 1848.

WHEAL CURTIS COPPER MINING COMPANY.—Notice is hereby given, that the board of directors have this day made a CALL of TEN SHILLINGS per share on the shares in this company, PAYABLE on the 26th day of October inst., and the proprietors of shares are requested to PAY the said call to the secretary, at the offices of the company, as below, between the hours of Ten and Four on that day.

By order,

GEO. A. JACOB, Secretary.

Basinghall Chambers, Basinghall-street, London, Oct. 3, 1848.

LAMHEROOE WHEAL MARIA MINING COMPANY.

Offices, 4, King-street, Cheapside, London, Oct. 5, 1848.

At a Special General Meeting of the adventurers, held this day, at the offices, as above, for the purpose of declaring a forfeiture of all such shares in the mine as may be found in arrear of the call of 10s. per share, due 8th July last,—

It was resolved,—That the said call not having been paid upon 180 shares, the same became forfeited on the 8d inst., agreeable to the resolution of the special general meeting of adventurers, held on the 12th of September last, and that the purser be desired to give notice of such forfeiture to each adventurer accordingly.

JAMES CROFTS, Secretary.

ASSAYING.—Mr. R. F. MUSHET (son of the late eminent metallurgist, David Mushet, Esq.) ASSAYS IRON ORES and IRONSTONES, of all descriptions, at the charge of 7s. for each assay—giving the metallic contents of each ore with perfect accuracy.—Address? Coleford, Gloucestershire.

ASSAYING AND ANALYSIS.—Mr. MITCHELL begs to inform the MANAGERS, &c., of MINES, SMELTING-WORKS, and MANUFACTORIES, that he still continues to CONDUCT ASSAYS and ANALYSES of all PRODUCTS, metallurgical and manufacturing, at his LABORATORY,

23, *HAWLEY-ROAD, KENTISH TOWN, LONDON,*

to which address communications are to be forwarded.—Instruction in all branches of assaying and analysis as usual.

The Cornish Miner's Adieu.

Farewell! my native hills, farewell!
A long a last adieu!
This heart with parting's pangs will swell—
Yet, with stern pride, I should repel
Its power to nature true:
Victim of laws by error plann'd,
'm banished from my native land!

I leave the soil that gave me birth—
The scene of earliest joys—
The homestead and the evening hearth,
The spots most loved of all on earth—
By statesmen deem'd but toys;
Which we in distant lands shall find,
And smile at those now left behind.

Shall they not reap the harvest dark,
Of deeds of cruel wrong—
Oh, Thou, who dost the progress mark
Of this our solitary bark,
Ocean's dread wastes along,
The exiled hearts that sadden here,
Thou know'st—Thou see'st—the exile's tear.

Speak Thou! oh, speak! let truthful words
Still reach the men of might,
Whose deeds that bitter tear records,
Meteing to labour base rewards,
Its weary heart to smite;
The labourer's cause he trusts to THEE—
Proclaim, oh, God! its dignity!

The labourer's cry, amidst Thine hosts
Angelic, is not scorned.
Whate'er base Mammon's votary boasts
From all earth's blood-polluted coasts
That gold-chained slave is warned.
I suffer exile, *but* his heart
From heaven itself Thou bidst depart.

Oh, Britain!—oh, my native hills!
Farewell!—a long farewell!
The exile's grief my bosom fills,
Yet hope, still hope, that bosom thrills,
And cherished be its swell.
A home beyond the western main
The banish'd labourer yet may gain.

Come—come—to me, my little one!
Lift up thine eyes on high,
And pray the prayer God's blessed Son,
Who walked the tempest's waves alone,
Hath taught us to reply
To all the wrong that man can do;
Oh, teach thy sire its spirit too!

For thy lov'd sake my heart was flame
Against the men that smote,
Even to the ground a father's claim,
To keep for thee a Briton's name,
And forced to shores remote,
To feed the stranger and the foe—
But, pray! I must forgiveness know.

Still pray, my child, for thee and me—
Lift up thy infant hands—
Let thy sweet voice inspirer be
Of hope upon the midnight sea,
And in far distant lands;
Thither a father's heart I bear,
Oh, pray with me forgiveness prayer!—S. E. M.: *Stockwell.*

Penzance Journal.

UNSTON IRON-WORKS.—These iron-works, the foundation stone of which was laid on the 11th March, and the first fire put in on the 7th June, were blown in on Tuesday, September 12; and, after several casual interruptions, are now progressing favourably and satisfactorily to all parties interested in their success. The hot-air apparatus is upon a new and improved principle, brought out by Mr. W. J. Scurrah, furnace builder, Chesterfield, and gives universal satisfaction to all who witness its powerful effects.—*Sheffield Times.*

COAL AND GOLD.—A curious fact is stated in the Philadelphia newspapers. From the annual report of the director of the United States Mint, it appears that the value of all the gold coined during the 24 years prior to 1848, was $12,741,653, or somewhat exceeding the average sum of half a million a-year—a very considerable addition to the stock of American wealth; but it appears, from the returns of the coal trade in Pennsylvania, that the value of this commodity brought to market in this State is annually equal to the above large amount: that last year, for example, the value of her anthracite brought down to tidewater—nearly 3,000,000 tons—was actually equal to the value of all the gold produced in the south during the 24 years. From this it appears, that the northern (Maryland as well as Pennsylvania) "coal" mines are more valuable "gold" mines than those of that metal in the south.—*Miners' Journal.*

Illustrated by 26 Anatomical Coloured Engravings on Steel, On Physical Disqualifications Generative Incapacity, and Impediments to Marriage. New Edition, enlarged to 196 pages.—Just published, price 2s. 6d., or by post, direct from the establishment, 3s. 6d. in postage stamps.

THE SILENT FRIEND: a medical work, on the infirmities and decay of the generative system, from excessive indulgence, infection, and the inordinate use of mercury, with remarks on marriage, and the means of obviating certain disqualifications, illustrated by 26 coloured engravings. By R. & L. PERRY & Co., 19, Berners-street, Oxford-street, London. Published by the authors; sold by Strange, 21, Paternoster-row; Hannay, 63, and Sanger, 150, Oxford-street; Starie, 23, Titchborne-street, Haymarket; and Gordon 146, Leadenhall-street.

PART THE FIRST treats of the anatomy and physiology of the reproductive organs, and is illustrated by six coloured engravings.—PART THE SECOND treats of the consequences resulting from excessive indulgence, and their lamentable effects on the system, producing mental and bodily weakness, nervous excitement, and generative incapacity; it is illustrated by three explanatory engravings.—PART THE THIRD treats of the diseases resulting from infection, either in the primary or secondary form, and contains explicit directions for their treatment. The consequences of neglect, and of the abuse, of mercury are also clearly pointed out. This section is illustrated by 17 coloured engravings.—PART THE FOURTH treats of the prevention of disease by a simple application, by which the danger of infection is obviated. Its action is simple, but sure. It acts with the virus chemically, and destroys its power on the system. This important part of the work should be read by every young man entering into life.—PART THE FIFTH is devoted to the consideration of marriage and its duties. The causes of unproductive unions are also considered, and the whole subject critically and philosophically inquired into.

THE CORDIAL BALM OF SYRIACUM is exclusively employed in treating nervous and sexual debility, impotence, &c., 11s. and 33s. per bottle.—THE CONCENTRATED DETERSIVE ESSENCE, an anti-syphilitic remedy, for purifying the blood in cases of infection, secondary symptoms, eruptions, and the abuse of mercury, 11s. and 33s. per bottle.—PERRY'S PURIFYING SPECIFIC PILLS, 2s. 9d., 4s. 6d., and 11s. per box—a certain remedy in gonorrhœa, gleet, strictures, and chronic inflammation of the bladder.—Consultation fee, if by letter, £1. £5 packets, with advice, to be had at the establishment only, by which the fee, £1, is saved.—Attendance daily at 19, Berners-street, from 11 to 2, and 5 to 8; on Sundays, from 11 to 1.

Sold by Sutton and Co., 10, Bow Churchyard; W. Edwards, 67, St. Paul's Churchyard; Barclay and Sons, Farringdon-street; Butler, 4, Cheapside; R. Johnston, 63, Cornhill; L. Hill, New Cross; W. B. Jones, chemist, Kingston; J. W. Tanner, Egham; S. Smith, Windsor; J. B. Shillock, Bromley; T. Riches, London-street, Greenwich; T. Parkes, Woolwich; Ede and Co., Dorking; and John Thurlby, High street, Romford—of whom may be had the *Silent Friend.*

REMOVED TO No. 37, BEDFORD-SQUARE, LONDON.
DR. LA'MERT ON THE SECRET INFIRMITIES OF YOUTH AND MATURITY,
With 40 coloured engravings on steel.
Just published, and may be had in French or English, in a sealed envelope, 2s. 6d.; or post-free, from the author, for forty-two stamps.

SELF-PRESERVATION: A Medical Treatise, on the Physiology of Marriage, and on the Secret Infirmities and Disorders of Youth and Maturity, usually acquired at an early period of life, which enervate the physical and mental powers, diminish and enfeeble the natural feelings, and exhaust the vital energies of Manhood; with Practical Observations on the Treatment of Nervous Debility, whether arising from these causes, close study, or the influence of tropical climates; local and constitutional weakness, syphilis, stricture, and all diseases and derangements resulting from indiscretion; with 40 coloured engravings, illustrating the Anatomy, Physiology, and Diseases of the Reproductive Organs, explaining their various structures, uses, and functions, and the injuries that are produced in them by solitary habits, excesses, and infection.
BY SAMUEL LA'MERT, M.D., 37, BEDFORD-SQUARE, LONDON.
Doctor of Medicine, Matriculated Member of the University of Edinburgh, Licentiate of Apothecaries' Hall, London, Honorary Member of the London Hospital Medical Society, &c.
REVIEWS OF THE WORK.
"The author of this singular and talented work is a legally qualified medical man, who has evidently had considerable experience in the treatment of the various disorders, arising from the follies and frailties of early indiscretion. The engravings are an invaluable addition, by demonstrating the consequences of excesses, which must act as a salutary warning to youth and maturity, and by its perusal, many questions may be satisfactorily replied to, that admit of no appeal, even to the most confidential friend."—*Era.*
"Unquestionably this is a most extraordinary and skilful work, and ought to be extensively circulated; for it is quite evident that there are peculiar habits acquired at public schools and private seminaries, which are totally unknown and concealed from the conductors of those establishments, and which cannot be too strongly reprobated and condemned. The engravings that accompany the work are clear and explanatory; and being written by a duly-qualified medical practitioner, will, doubtless, be the means of saving many a youth, as well as those of maturer age, from the various evil consequences resulting from early indiscretions."—*Magnet.*
Sold by Kent and Richards, 52, Paternoster-row; Hannay, 63, Oxford-street; Starie, Tichborne-street, Haymarket: Mansell, 115, Fleet-street; Gordon, 146, Leadenhall-street; or free by post, for 42 stamps, from the author's residence, who may be consulted personally (or by letter) on those disorders daily, from 10 till 9 and from 5 till 8.

ON NERVOUS DEBILITY AND GENERATIVE DISEASES.
Just published, the thirty-fifth thousand, an improved edition, revised and corrected, 120 pages, price 2s., in a sealed envelope, or forwarded, post-paid, by the Authors, to any address, secure from observation, for 2s. 6d., in postage stamps, illustrated with numerous anatomical coloured engravings, &c.

MANHOOD: the CAUSES of its PREMATURE DECLINE, with plain directions for its perfect restoration. A Medical Essay on those diseases of the Generative Organs, emanating from solitary and sedentary habits, indiscriminate excesses, the effects of climate, and infection, &c., addressed to the sufferer in youth, manhood, and old age; with practical remarks on marriage, the treatment and cure of nervous and mental debility, impotency, syphilis, and other urino-genital diseases, by which even the most shattered constitution may be restored, and reach the full period of life allotted to man. The whole illustrated with numerous anatomical engravings on steel, in colour, explaining the various functions, secretions, and structures of the reproductive organs in health and disease; with instructions for private correspondence, cases, &c.—By J. L. CURTIS & CO., consulting surgeons, 7, Frith-street, Soho-sq., London.
REVIEWS OF THE WORK.
We feel no hesitation in saying, that there is no member of society by whom the book will not be found useful—whether such person hold the relation of a parent, preceptor, or a clergyman.—*Sun*, Evening Paper.
J. L. Curtis, On Manhood, and the Causes of its Premature Decline; with Plain Directions for its Perfect Restoration.—[Strange, Paternoster-row.]—This is a book replete with valuable advice and information. It developes the fearful shoals on which a large proportion of human happiness is wrecked, and furnishes a chart by which they may be avoided and escaped. Fortunate for a country would it be, did its youth put into practice the philanthropic and scientific maxims here laid down. One cause of matrimonial misery might then be banished from our land, and the race of the enervate be succeeded by a renewal of the hardy vigorous spirits of the olden time.—*United Kingdom Magazine.*
Manhood: a medical work.—To the gay and thoughtless we trust this little work will serve as a beacon to warn them of the danger attendant upon the too rash indulgence of their passions—whilst to some it may serve as a monitor in the hour of temptation, and to the afflicted as a sure guide to health.—*Chronicle.*
Manhood: by J. L. Curtis and Co.—Their long experience and reputation in the treatment of these painful diseases is the patient's guarantee, and well deserves for the work its immense circulation.—*Era.*
Published by the authors, and may be had at their residence; sold also by Strange, 21, Paternoster-row, London; Heywood, Oldham-street, Manchester; Philip, South Castle-street, Liverpool; Robinson, 11, Greenside-street, Edinburgh; Berry and Co., Capel-street, Dublin; and, in a sealed envelope, by all booksellers.

IMPROVEMENTS IN ARTIFICIAL STONE, CEMENTS, ORNAMENTAL TILES, BRICKS, AND QUARRIES.

[Patent dated March 22, 1848. Patentee, J. Ord. Specification enrolled Sept. 22, 1848.]

The patentee employs, firstly, for the manufacture of an artificial stone, suitable for building, paving, and other similar purposes, the following composition of materials, to which he gives the name of brown metallic lava:—Gravel, or stone broken into small pieces, 3 parts; pounded chalk, 2 parts; tar, 1 part; wax, 1-10th. The tar is first melted in a cauldron, and the wax, gravel, or broken stone, chalk, and mineral colour are successively added. The artificial stone, or metallic lava, thus formed, is cast in moulds, either into solid blocks of any required form, or into hollow vessels, as troughs and tanks. It is also made into pipes, in manner following:—A circular core or rod of wood, and of the length and diameter of the proposed pipe, is enveloped in paper, or other suitable substance, to prevent the lava adhering to the roller, and rolled over a flat table, covered with the lava in a warm and fluent state, till it has taken up a good coating of the lava; three or more iron ribs are then attached lengthways, and at equal distances, to the half-formed pipe, by winding wire round them; and when this has been done, a second coating is added, by rolling as before, and of thickness sufficient to cover the iron ribs and wire. The pipe being completed, is set aside to cool, after which the wooden core is withdrawn.

Secondly, the patentee employs for the manufacture of ornamental tiles, bricks, and quarries, another combination of materials, to which he gives the name of ornamental metallic lava, and which is composed as follows:—Ground flint, 2 parts; marble broken into small pieces, 3 parts; resin, 1 part; wax, 1-10th part; and some mineral substance to give, as before, the required colours to the lava—as, for example, cobalt for blue, yellow ochre for sandstone, red ochre for red granite, &c., 2-10ths parts. The modes of preparing this lava, and of casting it of various forms, are similar to those directed to be followed in preparing and casting in the brown lava. When it is desirable to produce an ornamental tile, brick, or quarry, according to any particular pattern or device, and in various colours, the following proceeding is adopted:—Suppose, for example, the tile is to be made in four pieces, inclosed one within the other, each of a circular polygonal, or any other arbitary form, and colours respectively of (1) blue, (2) yellow, (3) red, and (4) grey. The blue piece (1) is first cast by itself in a suitable mould, and allowed to cool. It is then taken from the mould and placed in the centre of the mould from which the yellow piece (2) is to be cast, and the yellow lava of which the latter is to be composed, poured in round the blue piece. The blue and yellow pieces (1 and 2), which have been thus united together, are next transferred to the centre of the mould, from which the red piece (3) is to be cast, and the red lava of which the latter is to be composed poured round the blue and yellow. And, finally, the triple pieces of the blue, yellow, and red are placed in the centre of the mould, from which the outside piece of grey (4) is to be cast, and the tile completed by the addition of the grey lava. These pieces are all cast on a flat iron, with their surfaces undermost, which are intended to form the top surface of the tile when in use; and for the sake of economising the materials of which they are composed, each casting is made from about ½ an inch to 1 inch only in thickness. Requisite thickness and strength is afterwarts imparted to the tile, by giving the whole a backing of the brown lava hereinbefore described, which is poured on in a fluent state. When the tile has set and become cold, it is ground and polished on its upper surface, in the ordinary manner practised by marble workers—that is to say by a flat stone, sand, and water.

And, thirdly, the patentee manufactures an excellent cement from either of the combinations of materials before described; observing only to reduce the materials to as comminuted a state as can be conveniently done, and to apply the cement in a warm state.—*Mechanics' Magazine.*

STEAM-VESSELS.—It is required by a recent statute, that on or before the last day of the present month, the owners of all steam-vessels, whether they proceed to sea or not, transmit to the Board of Trade two declarations of the sufficiency and good condition of the hull of every steamer, and of the good condition of the machinery. By the 11th and 12th Victoria, cap. 81, it is provided that if the owners shall neglect to send the declarations, they shall forfeit and pay the sum of 10s. for every day's delay, unless such delay shall be accounted for to the satisfaction of the Board of Trade.

The Board of Trade have appointed E. E. Smith, R.N., shipwright surveyor, and T. Stuart, Esq., engineer, under the 9th and 10th Vic., c. 100, and the 11th and 12th Vic., c. 81, to examine and report on the hull and machinery of all steam-vessels in the Port of London. Vessels are liable to the survey twice a year—viz.: in October and April.

On the recent visit of the Lords of the Admiralty at Plymouth, Mr. Bothway, R.N., brought under their lordships' notice one of his 20-inch internal iron strap wood blocks, and pointed out the peculiar advantages which they possess over all others, and that the sizes now in use in the Government establishments might be very considerably reduced on his principle; to prove which, he offered to try one of his 20-in. against one of their 26-in. iron-bound blocks. Their lordships directed that a trial should be made on them, which is to take place on Monday. This experiment will be equally interesting to shipowners, for iron binding on the old principle, if the inventor be correct, will be done away with, and also rope strapping round the block. Mr. Bothway states that the largest block that will be required in her Majesty's service, on his principle, will only be in metal 20 in., and his wood blocks 26 in. The largest size now in use in the navy is 46 in.

ENORMOUS CHAIN.—Probably the largest chain ever sent out of Stourbridge was manufactured by Messrs. Bailey, chain manufacturers, from whose warehouse it was removed on Tuesday, to the wharf, consigned to a firm in Liverpool. It was a link chain, and intended for the use of an incline; its length was 2400 yards, or rather more than 1⅓rd mile, and its weight about 14 tons. It was removed to the wharf in a waggon drawn by eight horses.

RAILWAY RESIGNATIONS AND APPOINTMENTS.—Mr. W. Harding, late secretary of the Buckinghamshire Railway, has been appointed to the secretaryship of the London and South Western, in the place of Mr. P. Laurentz Campbell, who resigned, in consequence of indisposition. [Mr. Campbell, we regret to learn, died on Wednesday last.] Mr. Gifford succeeds Mr. G. King, as secretary to the Chester and Holyhead Railway; and Mr. W. Pulford, late superintendent of the joint station at London-bridge, receives an appointment on the Great Northern Railway.

CHESTER AND HOLYHEAD RAILWAY—FLOATING OF THE SECOND GREAT TUBULAR BRIDGE.—Active preparations are now being made, under the superintendence of Mr. Stephenson, M.P., and Mr. Clarke, his assistant, for floating the second great tube over the Conway into its proper place, prior to being finally fixed upon the grand piers and abutments on the 10th inst., for the through transit of the trains. The six pontoons, on which the tube will be cradled during the process of raising, are in readiness. They are of gigantic dimensions, each being 95 ft. long, 25 broad, and 8 deep—capable separately of sustaining 400 tons, though the real demand made upon them will be only 220. The castings at the pier ends are completed, and the hydraulic machines for lifting at the right time of tide are ready. The total weight of the tube is 1300 tons, formed of rivetted iron-plates; span over the river 400 ft., and its inside width 14. The tube in juxta-positon with the new one now to be lifted, has been up for four months, and during that period has been subject to the daily transit of express and heavy trains, and from observations made as to the effect produced, it appears that the deflection does not extend to the 16th part of an inch.

The directors of the Eastern Counties Railway have determined on enlarging the accommodation at the Colchester station, in compliance with the complaints of the inhabitants.

CUTTING OF THE FIRST SOD OF THE LANCASTER BRANCH OF THE NORTH-WESTERN.—On Thursday last the ceremony of cutting the first sod on this branch of the line of railway took place at Higher Bentham. P. Dawson, Esq., of Hornby Castle, chairman of the company, officiated. Mr. J. Allan, one of the contractors, having presented to Mr. Dawson, on behalf of himself and his partner, Mr. Couthard, a magnificent silver spade, and also an ornamental barrow of elegant construction, Mr. Dawson donned a navigator's cap, and then proceeded to cut several sods, which he wheeled away. Three cheers were then given for the success of the undertaking, and a large party afterwards partook of a sumptuous dinner, provided by the contractors.—*Liverpool Mercury.*

OPENING OF THE MALDON, WITHAM, AND BRAINTREE RAILWAY.—The two branches of the Eastern Counties Railway, termed the Maldon, Witham, and Braintree Railway, are now publicly opened for passenger trains. It affords three important market towns in Essex a direct railway communication with each other. It crosses, or rather branches, from the trunk line at Witham, the branch to Maldon being on the south side, 5¾ miles in length, and that to Braintre on the north, length 6¼. The company intend to run five trains each way a day, and the line is expected to effect a material improvement in the trade of the sea port town of Maldon.

NATURAL GAS BURNER.—A remarkable phenomenon is to be observed in Church Lawton, on the cutting of the Crewe branch of the North Staffordshire Railway, about 100 yards on the east of the crossing of the Newcastle Road, near the locks. A small run of water from the springy banks passes down the side of the line, and the surface is thickly embossed for some distance with strongly-issuing bubbles of gas, from the coal beds beneath. No doubt there are numberless other escapes of the gas in parts of the dry ground also, but the shallow stream of water, by causing the bubbles, discloses the whereabouts of this particular rush. Coming up among the wet sands, the vents of gas have just the appearance of little springs, only they are accompanied by the gurgling sounds of the bubbles, which are heard for some distance. On the application of a light, the whole surface will burst into a blaze, casting up a strong and hot flame to 1 or 2 feet in height, which will continue to burn, unless a very strong puff of wind comes to blow it out. It is remarkable that not the slightest smell can be traced of this strongly inflammable gas.—*Macclesfield Courier.*

Royal Cornwall Polytechnic Society.

The following are notices of some of the more important inventions exhibited at the meeting of this society:—

PROPOSED JET FOR BURNING GAS ISSUING AT HIGH VELOCITIES, ADAPTED TO GAS ILLUMINATION IN MINES.—Mr. R. J. Cunnack, of Helston, having heard that an attempt made to light the shaft of the man-engine at Tresavean Mine with gas, had been abandoned, in consequence of the difficulty of making it burn in the jets near the top of the shaft, arising from the force with which the gas was propelled from them, under the high pressure to which it was necessarily subjected, in order to counteract the weight of the column of air acting upon it at the bottom of the mine, it occurred to him, that, by placing a small reservoir immediately behind the jet, and in advance of the stop-cock, the force of the gas might be checked sufficiently to allow of its being regulated by the latter, so as to produce a clear and steady flame. The principle on which the model acts is, that a stream of gas, issuing at a high velocity through a small aperture in the cock, may be retarded, so as to issue from a larger one at a slower rate. The plan has been tested with bicarburetted hydrogen placed under a column of water 3 ft. high (the usual pressure applied to coal gas in towns being 3½ to 5 inches), when the flame was brilliant and steady, and it is conceived that under a much higher pressure, the same results would have been obtained.

MACHINES FOR MEASURING THE VELOCITY OF A STEAM-ENGINE.—Three models of machines for measuring the velocity of the piston of a steam-engine, or other variable velocities, were sent to the exhibition—one by Mr. George Gunnack, of Helston, another by Mr. Tresise, of Camborne, and a third by Mr. T. Hosking, of Hayle. Each of these machines appeared to be capable of answering the intended purpose, but their construction and manner of working cannot well be explained without diagrams.

INSTRUMENT FOR EXTRACTING THE BROKEN PART OF A BORER FROM THE HOLE, FOR MINERS, &c.—Mr. Charles Lane, of Helston, having heard much complaint by miners respecting their borers breaking when they are boring for blasting, it being out of their power, in most cases, to extract the broken piece, so that they are obliged to blast before the powder is at the depth wanted, besides the danger of tamping the powder on the steel left in the hole—this had induced him to make the instrument sent to the exhibition; and, on examination, it appeared to be well adapted for its purpose.

MACHINE FOR LOWERING AND RAISING MINERS.—This machine was constructed by Mr. N. Sara, of Perran Wharf, and was not essentially different from others that have been previously exhibited, nor was it considered to be better adapted to its purpose.

STEAM OR HYDRAULIC WHEEL.—The object of this invention, as stated by Mr. James Sims, of Redruth, is to carry out the rotatory motion of steam-power in the most simple and economical manner, both in the construction of the engine and the use of the steam. The inventor remarked, that the motion of the piston being independent of that of the wheel, it makes its stroke so instantaneously, that no other mode of expansion can compete with it. He also stated, that the engine was well adapted for working with water-power, where there is a good height of water, but not sufficient for a water-wheel.

PLAN OF SELF-ACTING SAFETY MACHINERY FOR MINING OPERATIONS.—Drawings were given of the plan of this machinery, and without which it is impossible to describe the construction of it. The object is to prevent accidents to miners through the breaking of ropes, or the carelessness of the engineer or banksman. The plan appeared to possess much merit. The inventor was T. Miller, a millwright, in London.

NEW LOCK.—This was a lock of peculiar construction, the invention of Mr. John Michell, of Redruth, who stated that it was different from every other lock before constructed. A plain arbor is inserted into a small tube, which forms a complete key of itself, raises the lifters, and releases the bolt. It is sufficiently strong for large, front doors, &c. The most ingenious persons, he stated, cannot take a *fac simile* of its inner movements, and it is impossible to open it by false keys.

IMPROVED ASSAY SCALES.—This instrument, constructed by Mr. John Way, of Bissoe Bridge, was an example of the employment of magnetism to diminish friction. The model consisted of a beam and scales of ordinary form, with the addition of a horse-shoe magnet suspended directly over, and in close proximity to the steel axis of the beam. It is fitted with screws, which allow of its nice adjustment as to the position of the magnet with regard to its distance from the axis. The beam turns on knife edges, which rest on bearings of brass, and the effect of the magnet (from its tendency to lift the steel axis) is to lessen the pressure of these edges on the bearings, and consequently to diminish their friction, the result of this reduction, as stated by the inventor, being a degree of delicacy much greater than is attainable without the use of the magnet. In reference to the general applicability of the plan, Mr. Way submitted that a balance, though ever so well made, must still be liable to an appreciable amount of error due to the friction of its bearings, and that by the employment of a magnet, lessening the friction—say, by one-half (as was done in the case of the model shown at the last exhibition)—the amount of error, whether much or little, will be halved also, and the sensitiveness of the instrument to minute differences of weight be consequently doubled. He believed that for assay scales the use of the magnet would be of especial service; but, admitting the usefulness of the principle, it would be applicable to any balance of moderate size, and to many other kinds of mechanism.

ON THE COMPARATIVE LONGEVITY OF MINERS.—A paper on this subject was furnished by Mr. Quick, of St. Just. The writer referred to the communications made by Mr. Blee, of Redruth, at the last meeting of the society, on the comparative longevity of Cornish miners; but, as the term Cornish miners must include all persons engaged in mining operations throughout the county, it appeared necessary, in order to arrive at correct conclusions on this subject, to obtain statistical information from all the mining districts in the county, as considerable difference will be found, in some particulars, in the different districts. The town and parish of St. Just, in Penwith, contains a population of about 8000 persons, of whom 2125 are engaged in mining—1500 underground, and the remainder at the surface. In this, as in all mining districts, boys are employed at a very early age, but they seldom work underground before the age of 10 years, for which reason none are numbered in the tables given as miners before that age. The means afforded for compiling tables of this description are very limited, access being had only to one volume of the register, and that but partly filled, as each volume on being completed is forwarded to the superintendent registrar, so that the inquiry only extends over 18 months ending with July last. Another circumstance to be considered was the prevalence of influenza and hooping cough during the last winter, which proved fatal to many children and elderly persons, and considerably increased the rate of mortality. It might be objected, that the longevity of any class of persons could not be correctly ascertained without the observations were continued over several years; but as this was not practicable in the present case, the results now obtained are submitted, in the hope that in this age of improvement some plans may be devised by which the condition of the miner may be considerably ameliorated, and that in years to come, vital statistics in mining districts will prove that the present rate of mortality is very far above what it will then be, and that the longevity of miners will equal that of any other class of persons. The writer then referred to his tabular statements, one of the results of which was, that in St. Just the chances of a miner reaching 50 years of age are as three to two, while in the Redruth district they are rather more than three to two against him.—Mr. Quick remarked, that dangerous as the employment of miners is, by far the greater number of accidents are the result of carelessness, or fool-hardiness, on the part of the men themselves. A case had come under his observation within the last few days, which shows how little they think of danger, although they are so much exposed to it. A man having failed to take down a stone of 15 cwts. after repeated attempts, returned to work immediately under it. In pursuing his labour he, to use a mining phrase, "shot a hole," and the explosion so loosened the stone that it fell, but fortunately some small stones fell first and struck him, which caused him to step back, and by so doing, instead of being crushed to death, he escaped with a few bruises only. The mortality from diseases of the chest, among miners is 2·6 per cent. greater, by the returns, in St. Just than in Redruth, but this may in some measure be accounted for by the prevalence of influenza during the last winter. The deaths of miners in the Redruth district, compared with those in the St. Just are: in diseases of the chest, as 61·03 to 63·63; not miners, as 36·15 to 31·56. From other diseases, miners as 24·65 to 22·7; not miners, as 58·41 to 63·14. From accidents, miners, as 15·18 to 13·62; not miners, as 5·38 to 5·26. The principal unavoidable causes of the diseases to which miners are liable, are breathing in an impure atmosphere and climbing. It is pleasing to observe that great attention is directed to the former cause in mines generally, by numerous communications between the different levels when they extend some distance from a shaft, whereby the ventilation is improved, and great care is taken in selecting powder and candles of good quality. The other cause of disease is not so much under the control of the miner; he must descend to his labour and return again, and in the absence of a conveyance he must climb. In a few of the larger mines he has been assisted by the introduction of the man-engine, but the numbers so benefitted are small, compared with the whole body. It becomes, therefore, an object much to be desired that some means could be devised for the assistance of the greater number. Mr. Quick suggested, that as the society has been instrumental in the production of the engine already in use, it would be desirable that efforts be now directed to the introduction of some other means applicable to the smaller and less prosperous mines, as no doubt the expense of the machine has been an obstacle to its introduction to general use. Should this be accomplished, there can be no doubt that the health of the miner would be improved, and the average duration of life much increased; besides which, from less time being occupied in going to and returning from his labour, more would be devoted to his work, which he would be in a better state to perform, so that not only would his condition be improved, but benefit would accrue to the mining adventurer.—*West Briton.*

THE COPPER AND LEAD DUTIES BILL.

[Concluded from the Mining Journal of Sept. 23.]

The present article will conclude the writer's review of the recent Parliamentary proceedings upon this bill. The last Number but one of the MINING JOURNAL brought the question down to the passing of the bill through the Commons. On the same day, Friday, the 1st of Sept., it was carried into the Lords. Previously to its first reading being there moved by Lord GRANVILLE, Lord REDESDALE presented a petition against the measure, one of the most important petitions that was ever presented to Parliament from the mining districts of this country. It has been elsewhere said, with reference to the petitions presented to the Commons, "that the mine adventurers had not petitioned." The writer of this saw every one of 20 petitions presented to the House of Commons, with nearly 10,000 signatures, and he can take upon himself to aver, that they *were* signed by mine adventurers, by agents, captains, miners, and numerous others interested. He saw, also, the petition presented by Lord REDESDALE to the House of Lords; and he declares, in the broadest and most unequivocal terms, that it was signed, as it purported to be, by "Lords and adventurers in British copper, lead, and tin mines; and also by merchants, manufacturers, carriers, agents, miners, shipowners, and *others*, whose livelihood wholly, or in part, depends upon the prosperity of such mines." Those *others*, it can be shown, included magistrates, clergy, landed proprietors, farmers, shopkeepers, engineers, mechanics, and, in short, almost every other class of the inhabitants of the mining districts; so universal was the apprehension of the great extension of that injury, already severely felt by those engaged in mining operations, or dependent upon them. The petition was signed by 21,543 persons, representing above 100,000 of the population of that district; and yet there are men in Cornwall—and worthy men, too, out of their party—who say, aye, and put it in print, that "the great mining interest of our county is in favour of the repeal of the duties on copper ore!" Did not the worthy gentleman, in this phrase, consider the smelters as composing the great mining interest? If so, his accuracy cannot be doubted.

Lord REDESDALE, in presenting this "monster petition," and the Earl of FALMOUTH, in presenting one from Mr. TREFFRY, the largest employer in the western counties, urged upon the House the importance of the question, and the ruinous effects that the proposed measure would produce upon the interests of all classes, directly or indirectly connected with mines, excepting always the smelters, for whose especial benefit, and that of the owners and hirers of slaves, this law has been enacted. These two petitions embody a mass of incontrovertible facts and conclusive reasoning, which may bid defiance to all cavillers to overturn or shake. But, what matters that? As the bill was carried in the Commons by men in office and their hangers-on, without any reference to its merits or care for its consequences, so, as the result proved, was it carried through the House of Lords by even less creditable means.

After the presentation of the petitions, Lord GRANVILLE moved the first reading of the bill, which was opposed by Lord REDESDALE, in a speech of some length and considerable ability, delivered with that fearless spirit which ever marks his Lordship's language, and based upon the soundest constitutional and patriotic principles, which he is not the man ever to compromise. His Lordship commented, with becoming severity, upon the treatment that House had received from the other House on the subject of this bill; after the question had been before them for nearly four months, and adjourned above 30 times, to be sent up to them on the 1st Sept., within three days of the prorogation of Parliament, when it was utterly impossible for their Lordships to give a fair consideration to the question. "It was on account of the manner in which this House had thus been treated by the other House, that he felt it to be his duty to take the unusual course of objecting to the first reading of the bill;" which his Lordship did, by moving, as an amendment, "that this bill be read a first time this day six months."

His Lordship was followed, it cannot be said answered, by the Marquis of LANSDOWNE; for, with the exception of the production of a one or two year old, and worn out, letter of "Our Consul at Philadelphia," telling of two smelting establishments in the United States, which have produced a matter of 5 or 10 tons of copper a-week—and it is most worthy of remark, *en passant*, that, since that letter was written, its just value has been shown, by official accounts, proving that the increase of our export of copper to the United States was, last year, above 20 per cent. more than that of the preceding, or any former year—with the exception of that letter, there was not, in Lord LANSDOWNE'S speech, one statement alleged as fact, which is not only susceptible of disproof, but which had not long before, been shown to be utterly destitute of foundation. And his Lordship's reasoning was just upon a par with his facts—not worth a straw. But, said his Lordship, "the bill had been passed in the other House by a *large* majority [the wonderful majority of 13, all mere hacks], and if their Lordships refused it a first reading, they would stamp it with a mark, not merely of discourtesy, but of contempt."

That any member of a ministerial body could stand up in his place in Parliament—knowing how shamefully his colleagues had been acting in the lower House for the preceding four months, with respect to this very bill, and then sending it up to the Lords within three days of the close of the session—that any Minister should, under such circumstances, rise, and talk about "discourtesy" and "contempt," may not, indeed, be matter of much surprise, but it is unquestionably strong evidence of a large share of assurance on the part of the speaker; and the proceeding, both before and after this creditable sally of the noble PRESIDENT of the COUNCIL, was so considered (if not stated in words, yet conveyed to the full extent here given) by Lord REDESDALE; which was immediately confirmed by Lord MONTEAGLE, who "entirely concurred with the noble Lord (REDESDALE), and he thought that their Lordships were called upon, in some way or other, to mark their sense of such a proceeding, and to guard against a repetition of it, by taking some step in the next session to prevent any bill whatever being sent up to that House after a certain date."

The Earl of FALMOUTH entered somewhat fully upon a review of the proceedings under the bill of 1842, combatting the noble Marquis's assertion, that it was an "experiment," as he had stated. By the way, if the noble Earl had referred to the language of the author of that bill (Sir ROBERT PEEL), he would have found that, on the 14th Feb., 1845, three years after it had passed, the right hon. Baronet, in proposing some further change in the tariff, specially excepted copper ores, "with respect to which," he said, "an arrangement was made in 1842, and *which had worked exceedingly well.*" And four months later, on the 20th June, 1845, Sir GEORGE CLERK, then Secretary of the Treasury, under Sir ROBERT PEEL, stated, in opposition to a motion for the repeal of the duties, made by Mr. PARKER, the present Secretary of the Treasury, "That it had been admitted, that the change which had taken place in 1842 was beneficial"—"and such being the case, he thought *it would be unwise to disturb an arrangement which was productive of so much benefit.*" Lord FALMOUTH then pointed out to the House, in strong and feeling terms, the present unfortunate position of Cornwall, with reference both to the harvest and the employment of the people; and his apprehension, that their situation would be further greatly depressed by the passing of the bill before them. After some remarks upon the smelters—the principal promoters of this bill, and the especial *protégés* of the Government—whom he well described to be "amongst the most unyielding and impracticable monopolists in this country," his Lordship alluded to the inconsistency of the CHANCELLOR of the EXCHEQUER, who, when the Cornish deputation, accompanied by the Earl of FALMOUTH and the county Members, waited upon him, exclaimed against "class legislation;" whilst, by this measure, he proved, that, although he would not legislate for the benefit of the *poorer class*, who do need protection, he had no objection to do so for the advantage of the *richer class*—which this measure will accomplish in the most perfect manner—a class so rich, and uniformly making such enormous profits, as to place them, in that respect, at the head of every class in this country!

The Earl of DESART and Lord WYNFORD shortly, but ably, supported Lord REDESDALE'S amendment, which was negatived by a majority of four.

On the following day, Saturday, the 2d September, the second reading of the bill was moved by Lord GRANVILLE, and again opposed by the Earl of DESART, in a spirited address, which, from so young a man, gave evidence of future powers of debate of no ordinary character. Then followed a scene which, if public men have any regard for their characters with the world, her Majesty's Ministers in that House must surely wish to be forgotten.

The Earl of DESART had stated nothing, in his address to the House, but what was most consistent, sound, and constitutional in matter, and most proper and decorous in manner. Certainly, he told the Ministers some home truths, about their "rash and undignified course of legislation;" but there was not a word uttered by his Lordship that was not strictly within the most rigid rules of Parliamentary debate. So did not think the PRESIDENT of the COUNCIL, if we may judge by *his* language. He commenced an attack upon his juvenile opponent, of the most insulting and indecorous kind; and concluded a speech, in words well befitting the insolence of its general tenor, as follows:—"The noble Lord opposite took an opportunity, well suited to the value of his arguments, and showed his own estimate of that value, by bringing them under the notice of the House at such a time, and under such circumstances, as he addressed the House."

For any man to talk of "the value of arguments," who had himself, within the preceding 24 hours, so thoroughly proved his incapability of applying arguments of the slightest value to the question then under consideration, is certainly, to say the least of it, a great stretch of even Parliamentary license. But that was not the worst feature in the case. The Marquis of LANSDOWNE so shaped his remarks, as to have it believed, that a pledge had been given by Lord REDESDALE, the night before, that no further opposition should be made to the bill. How far he was justified in doing so, will shortly appear.

The Earl of FALMOUTH again "deprecated the course pursued by Government, in urging forward a measure of such importance at that late period of the session, and when the House had had no opportunity of fully judging of the provisions of the measure, which had come up from the House of Commons only yesterday."

Earl GREY'S remarks quite deserve to be fully reported; and the following, which is the fullest report that can be found, is certainly correct in substance:—"Earl GREY said, that he considered it unfair and unusual, and he hoped it would continue to be unusual, on the part of noble lords, to come forward to oppose a measure when they had, by their silent assent last night, given a tacit promise not to urge their opposition upon the second reading of the bill. With respect to what had been said as to the late period of the session at which the bill came up to that House, the Government was not responsible for that, because it was caused by the opposition which the measure had met in the House of Commons."

The writer hesitates in deciding, to which of the two Ministers—the PRESIDENT of the COUNCIL or the COLONIAL SECRETARY—he ought to yield the palm of assurance. Their claims would seem to be tolerably equal—*arcades ambo*. But the noble SECRETARY for the COLONIES must have been strangely oblivious of public opinion, upon matters of somewhat recent occurrence, when he talked of "silent assents" and "tacit promises." That, however, is quite modest, compared with his justification of "the late period of the session at which the bill came up to that House" being "caused by the opposition which the measure had met in the House of Commons." Two other reports give the words as "lengthened opposition," and "vexatious opposition." The writer believes the latter word, "vexatious," was employed. But that is immaterial. It is sufficient that the word "opposition" was used; because its use, in such a way, necessarily implies something of a lengthened, or determined, or vexatious nature. Was ever a legislative body more insulted than was the House of Lords by these words? What! a measure which had been kept upon the books of the House of Commons at least twice a week for nearly four months, between the first and second readings; and which could never, throughout that period, be opposed, for the simplest of all reasons—because it was never brought on, but was postponed by Ministers between 30 and 40 times; and which was first brought forward for discussion, within about an hour of midnight on the Monday of the same week in which the noble Lord was uttering these extraordinary words; and then forced, day by day, through all its five stages, from the second reading at two o'clock on Tuesday morning, to its being passed at the same hour on Friday afternoon, just three days and a-half. And that is "vexatious opposition!" The noble Lord may be left to form his own estimate of the value to be placed upon his words, after such a specimen. The world has not much to learn upon that head.

Lords WYNFORD, DESART, LONSDALE, and CARDIGAN, were opposed to the second reading; but as men, themselves actuated by strong feelings of honour, having heard the declaration of the PRESIDENT of the COUNCIL, they were induced, under the influence of those feelings, to abandon their opposition, and to suffer the bill to be read a second time.

Suspicions arose, however, that the matter was not exactly as the PRESIDENT of the COUNCIL had placed it before the House; and a letter of inquiry was addressed to Lord REDESDALE, at his seat in Gloucestershire. The answer to that letter was received on Monday morning, and on the order of the day for the third reading of the bill—its fifth stage in 44 hours (excluding Sunday) from its first introduction into the House—the Earl of DESART read the letter received from Lord REDESDALE; and which, in the plain, straightforward, manly style, that well becomes his Lordship's character, distinctly negatived the declaration of the Marquis of LANSDOWNE, as to the pledges that no further opposition should be given to the bill. It was then read a third time, and on the question "that the bill do pass," Lord FALMOUTH divided the House—contents 25, non-contents 11—majority 14.

The following day, Tuesday, the 5th Sept., the QUEEN, on proroguing the Parliament, had the ungracious task assigned to her, of using, in reference to this bill, the words which commenced this series of articles—"*La Reine le veut.*"

But something more still remains to be said upon this very extraordinary proceeding. The Marquis of LANSDOWNE stated to the House, that a pledge had been given, that no further opposition should be offered to the progress of the bill, after the division on the first reading. This Lord REDESDALE distinctly denies. He spoke merely for himself, as he should be absent on the following day. But, because all the noble Lords on the opposition side of the House did not rise in a body, and say they would oppose it further, it must be taken for granted, forsooth! that their silence was to be construed into an admission that they would not! That would have been "silent assent" and tacit promise" with a vengeance!

It is not only justifiable, but absolutely necessary, when important national questions are at stake—when, as in this case, the welfare of 100,000 of our population, even the existence of many of the number, hangs upon a public measure;—at such times, it is essential to waive all those scrupulous considerations that would regulate the use of language in cases of less magnitude. The writer, therefore, however unwillingly, feels himself compelled, in justice to the interests of all concerned, to employ terms alien to his habits—terms to which he is unused under ordinary circumstances—to furnish a solution of the proceedings of Ministers in this case—a solution for which, he apprehends, the readers of the MINING JOURNAL are but little prepared. He declares, boldly and unhesitatingly, that the whole affair was a *trick*. Ministers counted heads on the opposition benches; they saw themselves outnumbered, and if they had gone to a division, the Bill would have been thrown out. They knew that their colleagues in the Lower House had adopted measures, with relation to the question, so unconstitutional, that scarcely any step short of an impeachment would have met the justice of the case. Their position was one of danger; and dangerous cases call for desperate measures. Such measures were resorted to; and the friends and supporters of native interests and native industry *were tricked out of a division*, and the Bill was thus saved!

It remains for the noble Marquis, the PRESIDENT of her MAJESTY'S Council, to satisfy the world of the difference, in a moral sense, between *falsehood insinuated*, and *Touchstone's* last definition of the *lie direct*. It would almost seem as if the noble Marquis and the noble Earl, his colleague, before entering upon this question, had been studying SHAKSPEARE; for we find, in the two short debates that took place, on the first and second readings of this Bill, all the latter stages, at least, of *Touchstone's* seven compound definitions of the quarrel and the lie; which most of your readers will call to mind in the comedy of *As You Like It*. It must be granted that his two first stages—the "*retort courteous*" and the "*quip modest*," were overlooked, as, perhaps, too tame. But let any one look at those short debates, and see whether he cannot put his finger upon expressions, which furnish the "*reply churlish*"—the "*reproof valiant*"—and the "*countercheck quarrelsome*:" nor would it, perhaps, be either inapplicable or unjust to finish the quotation, by adding, in some or other sense of application—"and so to the *lie circumstantial* and the *lie direct*."

The writer has been charged, in print, with "dipping his pen into gall instead of ink, and presuming to state, that Lord JOHN RUSSELL uttered 'barefaced misrepresentations and falsehood'—that Mr. LABOUCHERE 'asserted what he must have known to be utterly false.' Least of all will he advantage the cause he espouses, when he says, 'the statements from Lords LANSDOWNE and GREY were so utterly destitute of truth as to be disgraceful to them both.' The British empire—the world itself—cannot produce four more distinguished and honourable men." Without referring back to see if these quotations are correctly given, the writer will assume that they are so. And what then? He asks where he has uttered a single word against the private characters of these several parties, *as men?* Nowhere. He would scorn to do it, because he thinks it would be unjust. He admits and believes, that the greater number of them, at least, if not all, in their private stations, are everything the party, whose words are here quoted, says of them; and their good qualities might be much more extended; nor does the writer know why the CHANCELLOR of the EXCHEQUER should not have had the benefit of the shield of the worthy champion of his colleagues. But that shall not prevent the writer including the right hon. gentleman in *his* category of good qualities—which are honour, integrity, kindness, hospitality, charity, and other amiable traits—*all in private life.*

But when these same parties are spoken of in their *ministerial characters*, the case is materially changed. Nor does the writer retract one word of what he has said of each and all of them. On the contrary, he here distinctly reiterates every charge he has made. Any reference to the PRESIDENT of the COUNCIL or the COLONIAL SECRETARY would be needless, beyond what is written above; and let any unbiassed person say, if the statements of both those noble Lords are anything but "utterly destitute of truth"—and, if so, if they are not "disgraceful to both."

To come to the FIRST LORD of the TREASURY; the leading object of the chivalrous gentleman's defence. Let the same unbiassed person read the noble Lord's statement of the 18th February; and then taking the proved facts in these articles, or elsewhere written, applicable thereto, say, if those statements are not "barefaced misrepresentations and falsehoods." But the writer's worthy opponent ought to have done him the justice to have coupled with his observations the qualification which accompanied the quoted words. They were *uttered* by Lord JOHN RUSSELL. But his Lordship was unfortunate in submitting to make himself the *mouth-piece* of others, to state what he did; and it was one of his Lordship's greatest oversights in the case, that, without sufficient inquiry, in channels where he would have been better informed, he adopted the information conveyed to him by interested parties, which is full of the most "barefaced misrepresentations and falsehoods." And it is a grave ground of charge against the noble Lord, that, in a case of so much importance, he, subsequently to his own statement, and long before even the resolutions were brought in, refused inquiry, which refusal was confirmed by negativing Sir C. LEMON'S reasonable motion for a select committee on the 17th April.

Then, as to Mr. LABOUCHERE, let any man read the following extract from the report of his speech on the 17th April.—[*Hansard* is here quoted, vol. 98, page 438.] "He (Mr. LABOUCHERE) believed, that the purest ores imported into this country from Cuba contained only 10 per cent. of copper; and taking the freight at 3*l.* per ton, there was a protection of no less than 30*l.* upon every ton imported. In the case of Chilian, the freight was 5*l.* per ton, and there was a protection of 50*l.* per ton in the case of ore containing 10 per cent. of copper; 60*l.* in the case of ore having 7½ per cent. of copper, and 100*l.* where there was 5 per cent. of copper. This showed the large amount of protection given to this description of ore." To quote SHAKSPEARE and *Touchstone* again—had the right hon. gentleman "thought but of an *if*," he might have gone on *ad infinitum*; thus, "*if* the purest ores from Cuba contained" so-and-so, then "there was a protection of" so-and-so. "Much virtue in *if*," as *Touchstone* says. But for the want of that little forethought of the "*if*," the right hon. gentleman's words become absolute assertion; and that assertion not being true, it must be "utterly false." And as there can be no question of Mr. LABOUCHERE having asserted it, if he did not know it to be false, he ought to have done, or he is unfit for his office. The meanest clerk in his department would have been discharged for a blunder to a tenth part of that extent, or the thousandth part of its importance, when it is considered that it was introduced into a debate, in order to influence a decision of the House.

But *was* the right hon. gentleman's assertion "false?" "He believed that the *purest* ores from Cuba contained only 10 per cent. of copper." Those were his words. Now, for the four years, 1843 to 1846, the average quantity of metal in the ore of Cuba was 16·79 per cent. Then, "in the case of Chilian"—he quoted three degrees of produce or richness of the ore, to show the amount of protection which the freight afforded, at 10, 7½, and 5 per cent. of copper in the ore. Now, in the same four years, 1843 to 1846, the average richness of the Chilian ore was, neither 5, nor 7½, nor 10 per cent., but 30·54 per cent. And at the moment that the right hon. gentleman was speaking, the average richness of Chilian ores was, and had been for three years, above 32 per cent. All these statements, it must be remembered, were made in the House of Commons for effect; and, doubtless, they had their effect upon the votes of Members, coming from the PRESIDENT of the BOARD of TRADE, whose duty it was to have correct accounts on all such subjects. Coming, then, in that shape—intended to influence the decision of the House—and being "utterly false"—the writer strengthens his former remark, and says, they were most *wickedly false*, and most unconstitutionally advanced by the Minister.

The writer doubts if the Ministers, whom his opponent has thus brought forward in a shape requiring that their misdeeds should be repeated, will thank him for what was evidently a well-intentioned act.

There remains, then, only the CHANCELLOR of the EXCHEQUER to be noticed. The charge against the right hon. gentleman is, that he has carried his measure by *trickery*. He distinctly promised that he would not bring in the bill without giving certain Members, supporters of the mining interest, notice when he intended doing so. Failing entirely in the performance of that promise, and without any such notice, he brought in the bill at one o'clock in the morning of the 9th May, and had it read a first time, with perhaps a score of Members in the House. That, surely, was *trickery*. Then he had the assurance to fix the second reading for the next day. That, however, failed. And then began that system of jugglery, of putting it twice a week, for 16 weeks, on the orders of the day, and as often postponing it; doubtless, but for the vigilance of the miners' friends, hoping, on some one of those occasions, to snap a second reading at midnight, before his little *coterie* of backers. At length he was forced to pledge himself not to bring it on after 10 o'clock at night. And yet, in the face of that pledge, he brought it forward, for a second reading, a few minutes before 11, after a heavy sitting, and when the Member who had given notice of an amendment, had, a few minutes before, left the House, under the impression that it was not coming on. That, again, was *trickery*. The day after that, at 20 minutes before three in the morning, after the House had been sitting 13 or 14 hours, he proposed going into committee, knowing that the question would again be resolutely contested. Now I contend that the simple word *trickery* is altogether too slight a term for such an attempt; and, at all events, it must be called *audacious trickery*. But it is of no use going on with the recital. The plain truth is, that the whole affair, from Alpha to Omega—from first to last—on the part of the Ministers, in both Houses, was one systematic course of trickery, jugglery, misrepresentation, and fraud:—fraud of the grossest kind, committed upon the property of employers, and upon the labour of the employed, in the mines of this country, to minister to the further accumulations of the already overgrown wealth of a clique at home—to foster slavery, in its worst form, abroad—with a direct sacrifice of revenue—and the certainty of diminished contributions from those districts at home, which are made to suffer—and, finally, with the risk of augmented suffering leading to local disturbance.

Such are the writer's honest and conscientious conclusions and apprehensions. If any one thing would be hailed by him with more delight than another, it would be to find that he had drawn too gloomy a picture. If, on the contrary, he should prove a true prophet, then, after the abundant warnings they have received, upon the heads of those who have brought down the evil upon the country, be all its consequences.

In taking leave of a subject to which he has devoted much and anxious attention, the writer cannot conclude without offering his humble, but sincere and mournful, tribute, to the memory of one who is taken from us in the flower of his age, and the midst of his useful and patriotic labours. It need hardly be said, that he alludes to Lord GEORGE BENTINCK, whose remains he, this morning, saw deposited in their last resting-place upon earth. With the high pleasure of the acquaintance, and, he may truly say, the friendship of that excellent nobleman, the writer has had many opportunities of appreciating all those great and sterling qualities of his mind and character, which he will no further enumerate than to say, that they combined everything that was estimable and good in the man and the friend, with all that could contribute to the establishment of the most exalted character, as the accomplished man of business, and the high-minded and energetic statesman.

By the inhabitants of Cornwall and Devon, most especially, and of the mining districts of the United Kingdom and the colonies, generally, his Lordship's memory ought ever to be cherished in a peculiar degree; since the last time that he raised his voice, in debate, in the House of Commons, was in anxious efforts for the protection and support of the domestic and colonial interests of the British miner, against the unlimited influx of what has been well described, by another ardent friend of that body, as the "*slave-begotten copper ores*" of other countries.—*Sept.* 29.

ACCIDENTS.

Damhead Colliery, Kilmarnock.—T. Raeside, aged 16, has died in consequence of injuries received while driving some waggons on the railway attached to the pit.

Dalzell Colliery, near Hamilton.—An explosion took place in one of the pits at this colliery, by which the lives of a number of persons were endangered, and six severely burned—one of them, named Stevenson, is since dead.

Galvanised Iron Company, Shutt End.—John Parry, while working in one of the pits, unfortunately sustained very severe injuries about his head and body—the former being literally scalped, by a fall of coal.

Gyrnos Limestone Quarry, near Cefn Coed-y-cymmer.—As T. Edwards and W. Williams were working here, one lost his footing, and the other, in endeavouring to assist him, fell over, when both were precipitated from a height of 26 yards—Edwards died in half an hour; Williams still lives, though so severely injured that he is not expected to recover.

Fatal Accident.—An accident, attended with loss of life, occurred at Vineyard Down Quarry, near the paper mills, in the parish of Monckton Combe. A man, named Samuel Nowells, with his two sons, were working the quarry, which belongs to Mr. Spence, of Combe Down, when Mr. Radborne, of Carriage-road, who had purchased a bar of stone, and was about to have it removed, called to them to render him some assistance. Nowell and one of his sons immediately came out of the quarry, but they had no sooner done so, than the roof fell in upon the remaining son, a lad about 15 years of age. The mass of stone which fell separated into two parts, leaving the body of the unfortunate deceased exposed to view betwixt them. The poor fellow was instantly caught up by his father, but life was quite extinct, and the body presented a most lamentable spectacle; it had been literally crushed, and the bowels were protruding. It is thought the accident must have arisen from want of props.—*Bath Journal.*

Rowley Regis.—Joseph Millward, while making some alteration to what is called the "blowing tub," connected with machinery at the works of Messrs. Badger, at Old Hill, the piston of the machinery, which was supported above by wooden props, suddenly fell upon him. It was a considerable time before the poor fellow could be extricated from his perilous situation (the weight of the piston, upwards of a ton, resting upon his body), when he was conveyed to his home, and it was found that the unfortunate man had received fractures of the lower jaw, and that his right leg and his body were dreadfully contused. He is now, however, progressing favourably.—*Wolverhampton Chronicle.*

Eagle Colliery, Rowley.—John Emery, while at work down a stone pit, was severely burnt about his arms and body by an explosion of sulphur. The poor fellow was compelled to remain in the pit in this painful situation for four hours, when the whimsey man arriving, he was brought out of the pit, and carried to his home in Dudley, where his burns were dressed. The unfortunate man is now considered out of danger.

Merthyr.—Arthur Bull was killed while working at the Plymouth works.

Bilston.—As J. Davis and B. Aston were at work, at four o'clock in the afternoon, on Thursday week, in the Deepfields Pit, belonging to Mr. Chavasse, bricking the shaft, the chain which supported the unfinished work gave way, and the whole of the brickwork fell inwards upon the men; they could not be got out until 10 o'clock at night, when they were quite dead, and much burnt, from the increase of a fire which they were allowed to have burning at the bottom of the shaft.

CHALK IN THE UNITED STATES.—It is a generally received opinion, that there are no chalk formations in the States, all of that article used in the country being brought from England. A communication from J. Pickell, to Prof. Silliman, however controverts this opinion. The writer says, that being engaged under the direction of the Topographical Bureau, to determine the practicability of the construction of a ship canal across the Peninsula of Florida, it became necessary to sink several shafts. At the head of a small stream running into Black Creek, and near the Santa Fé river, an excavation was carried to the depth of 55 ft., a stratum of chalk was perforated, containing flint nodules, of various sizes. The chalk was perfectly white, and, by a short exposure to the atmosphere, indurated to the hardness of the foreign article. The writer expresses the belief that this chalk formation continues through Georgia and the Carolinas, and perhaps to the coal region in Virginia.—*Miners' Journal.*

A very ingenious description of tile is being manufactured for the use of his estates, by R. Wason, Esq., of Corwar, consisting entirely of peat, and cut out of the moss by an instrument for the purpose.

A DREADFUL ENLARGEMENT OF THE KNEE CURED BY HOLLOWAY'S OINTMENT AND PILLS.—Abraham Banks, an elderly man, living near the Dry Creek, South Australia, had such a painful affection and enlargement of the knee that he despaired of ever recovering the use of his limb, the numerous remedies that he made trial of failing to banish or even to mitigate the disease. In this suffering condition he was advised to try Holloway's ointment and pills, and he commenced a regular application of them, which in a short time effected a complete cure. The *Adelaide Observer*, of the 25th March, 1849, publishes this as one among the many astonishing cures effected in South Australia by these invaluable medicines. Sold by all druggists, and at Professor Holloway's establishment, 244, Strand, London.

On the Winning and Working of Collieries.

BY MATTHIAS DUNN, MINING ENGINEER.

[No. XVII.—*Continued from the Mining Journal of the 20th September.*]

ON THE DIFFERENT SYSTEMS OF WORKING, WITH THEIR RESPECTIVE RESULTS.

I will now give a few practical examples of the "working" in different localities. The mode of working which generally prevails in Lancashire, under a depth of 50 or 60 fms., may be described as follows:—The levels are driven out narrow, the dip level being intended for the horse-road, and the rise level the return air course: out of the rise level, at right angles, are driven narrow drifts in pairs, having a 4 or 6-yard pillow between, and extending to the former range of workings, which may be stated at the distance of 60 or 80 yards; between each of these pairs of drifts are from 25 to 40 yards of solid coal, and as soon as the said rise drifts have arrived at the decreed lengths, they are communicated with each other, and conjointly bring back the working of the intermediate pillar of coal. This may be said to be the prevailing plan of working throughout Lancashire and the parts of Yorkshire around Wakefield; the general practice being to win from 80 to 100 yards of dip coal at a time—the pits along the level line being sunk at every 300 or 400 yards. Baskets are used for the conveyance of the coal to the shafts partly upon sledges, and partly upon wheel carriages. In coal-fields in which the seams are 4 ft. and upwards in thickness, and of immaterial inclination, this system will appear to practical persons impolitic, inasmuch as the cost of conveying underground is, by modern practice, greatly diminished by improved railways, &c.; and there is little doubt that if the best practice of the day were adopted, great saving might be effected in the working of such collieries.

The Dukinfield Colliery, in Cheshire, is one of the deepest in the district, and deserves mentioning. The coal lies at an angle of about 1 in 2, and the black mine seam has been exhausted by successive winnings, till it is now working at the depth of 200 fms. from the surface. As the coal is too steep to work the wickets from dip to rise, the plan has been to extend parallel levels, at the distance of 60 or 80 yards, to the dip of each successive range of old workings, similar to the method used in Lancashire, and at every 130 and 140 yards, to drive up a pair of drifts (jigg brows); out of these drifts again to turn level workings, 5 or 6 ft. wide, with a pillar of 8 or 10 yards between, which pillars were to be worked in returning towards the jigg brow. The low level being the horse-road, and the upper one the air-road, and, steep as the coal lies, the working is carried on by means of tubs, containing 8 cwts. of coal. In the early stages of the colliery, and under a light pressure, this system may have answered, but in the prosecution of the deep workings, no suitable attention has been paid to the increased depth. In consequence of this, no sooner had the new workings begun to be increased, than the pressure extending from the waste so affected both coal, roof, and floor, that a species of general creep was generated, which accumulated labour, destroyed the air courses, crushed the coal into small, and caused the drawing to the surface of great quantities of refuse, arising from the cuttings for height; the colliery consequently became fiery and dangerous, and great loss of life accrued.

In the Jarrow thick-band working, 150 fms. deep, where the high main coal contained a band of stone, 20 to 30 in. thick, it demanded an especial system of working, and which was adopted as follows:—Each board or working was turned wide enough to stow the whole of the band, which required from 10 to 12 yards. The tramway was laid up each side, and the whole of the intermediate space stowed up, which not only formed a support for the roof, but answered also as a brattice for conducting the air, a door being applied in the tramway. The weight which was thus superinduced from the roof upon the wall faces had a beneficial effect upon the working of the coal. Between each of these wide working places a pillar of coal was left, 3 or 4 yards in width, portions of which were subsequently taken out. I have seen this method of working pursued in some parts of North Wales, in which the seam was 4 ft. in thickness, and clean coal, the broken roof forming the material for stowing; but it is not at all applicable to such a case, for it produces unnecessary breakage both of roof and coal. A large space is left between each of such workings, but the pressure which is thereby induced has a prejudicial effect upon the remaining coal, and renders this system inferior to the ordinary pillar and stall method.

Coadtalon, North Wales, 10 ft. seam, 50 fms. deep.—This seam, which has a good roof, and lying nearly flat, is worked in the following manner. Three levels are extended from the shaft—viz.: The principal horse-road; a dip level for water and air-way; a rise level, whose pillar, 5 or 6 yards thick, is meant to defend the horse-road from the effects of pressure from the body of the workings. Out of the said rise level, witchets (boards) are driven 5 or 6 yards in width, and are holed into each other by intersections of a similar width, so that the pillar is only left 3 or 4 yards square, and as the workers advance, the back pillars are taken out along the top coal, 3 ft. thick, which is left standing during a certain stage of the working. Upon a similar plan to these, level drifts are extended to the rise of the shaft, so that two outlets are provided for the coals, and the support afforded by pillars adjoining to the horse-roads, entirely prevents any pressure from affecting them. The mode of laying out these collieries scarcely ever leaves more than 80 yards to work from dip to rise, and a very limited extent of water level ways, which is moderate in depth. The fine section of the seam and good roof, enable this working to be prosecuted under very favourable terms. The coals are brought from the workings to the levels upon sledges, and there transferred to wheel carriages.

Staffordshire thick coal, or 30 ft. seam,—As a preparatory measure, a pair of levels are extended from the shafts, which are always sunk in pairs, at convenient distances from each other. On reaching the intended limit, the working is commenced on one or both sides of the levels, about 20 yards wide; and, at certain intervals, coal pillars of 7 or 8 yards square are left for the support of the roof, the openings on every side being of similar width. Directly outside of this side lane, a barrier, or fire rib, of 16 or 20 yards in width, is left for the purpose, not only of preventing any crush from extending outwards, but also for the purpose of afterwards inserting a dam, or stopping, for confining the gases, which will naturally generate in so large a space, ill ventilated. A similar process is repeated, until the decreed area be mined over, each abandoned district being dammed off as soon as it is exhausted, or overtaken by the breeding fire. The working of so large a seam, by a single process, is attended with many difficulties; and, although a considerable quantity of roof coal be left on, yet it frequently breaks away, as also huge masses of coal in the course of working, so that there is a continual loss of life accruing from falls of coal alone; and when the ventilation of so immense a space becomes inadequately supplied with air, the consequence is obvious, in respect to fires and explosions. In former times, the gas which accumulated in the upper recesses of this large seam, was fired off from time to time, to the imminent loss of life, but that barbarous practice has been long since laid aside, and various devices suggested. In the working of the 30 ft. seam, the small coal necessarily produced and left below during the process of mining, and the loss of coal in pillars and barriers, amount, in the opinion of well-informed persons in the district, to considerably more than one-half of the whole contents of the mine, and according to others, two-thirds. The result of this mode of working carries with it certain disadvantages. In the first place, owing to the great deposition of small coals, mixed with pyrites, in workings inadequately ventilated, a fermentation invariably takes place, and, in the course of time, produces amongst the refuse coal a combustion, which is called breeding fire by the colliers, which invariably causes an abandonment of that district of the work, to be followed by the process of damming, or stopping off, by means of the fire rib before mentioned, which fate duly awaits each successive working, and not unfrequently leads to the covering up of the shafts. As may naturally be expected, the gases thus imperfectly enclosed, are frequently brought in contact with the lights outside, and dreadful explosions are the consequence. The working of the thick coal is mainly carried on by butty colliers, or contractors, to which cause I attribute many of the existing evils, both as regards loss of mine and loss of life, inasmuch as both ventilation, and other means of safety, are left much to the discretion of the colliers, instead of being under the constant surveillance of a staff of intelligent persons, acting for the interest of the proprietor of the work. It is true, that in each pit a doggy is appointed, but these men are, generally speaking, ill-informed, ignorant of recent improvements; nor is it intended that they should be allowed such aid as to set timber, conduct ventilation, or carry into effect such precautionary measures as appertain to the duties of overmen and deputies in the north of England. In concluding this part of the subject, I cannot help throwing out the suggestion, that a more beneficial effect would be produced in regard to the safety of the people, and the obtaining of produce from the mine, if it were worked in two or more departments, as separate seams. The process of ventilation would be much better effected, the generating of fire would be prevented by the distribution of the small coal over a much greater area, should even the same proportion be produced. Although great quantities of small coal are stowed in the northern collieries, yet such a circumstance as spontaneous combustion is unknown, because the small coal scarcely exceeds 3 ft. in thickness, whereas in Staffordshire it is 8 ft. or 10 feet.

Mr. Deakin, of Blaenavon, South Wales, has been so good as to transmit to me some sketches of his mode of working, but which I find to be so very similar to some of those in Lancashire and North Wales, that it is scarcely necessary to explain them further than the following general description:—A pair of levels are extended at every 60 or 80 yards, which are connected by pairs of drifts at certain intervals, the intermediate masses of coal being worked back, as soon as the said drifts shall have reached their limit. Where the seams are very steep, workings parallel to the said levels are driven, similar to those at Dukinfield. The pillars being removed in returning, the distance between each pair of drifts being about 120 yards, half of which is carried to each incline, or jigg brow; and when the roof is very bad, the said drifts are reduced to the distance of 60 yards apart. When driven to the extent, a communication is formed, and the coal between them brought back, as by long-wall.

[*To be continued in next week's Mining Journal.*]

The Compendium of British Mining.

ORIGINALLY COMPILED AND PUBLISHED IN 1843.

REVISED, CORRECTED, AND ENLARGED FOR THE "MINING JOURNAL,"

BY J. Y. WATSON, ESQ., F.G.S.

No. II.—GENERAL FEATURES OF A MINE.

A mine is a depository of mineral, or ore, in the bowels of the earth, and opened for the purpose of obtaining the produce. It has been legally determined that no mine can properly be said to exist, before it has been opened by shafts, pits, or levels; for, before that has been done, there can be no positive certainty that any mineral, or ore, lies in that particular district. As land includes, in general, everything beneath its surface, the owner in fee of land is almost invariably the owner of the mines lying underneath, with the exception of gold and silver mines, which belong by prerogative to the Crown.

The mines in Cornwall are generally worked by a company of proprietors, called adventurers, who agree with the *lord*, or owner of the *soil*, for a certain number of years, paying either a fixed per centage, or a certain proportion of the ores raised, called *dues*, being 1-15th, 1-18th, or 1-20th, as may be agreed upon. The grant thus made is called a *sett*. The bounds or limits of a mine are marked generally on the surface by large stones, placed at equal distances; and, considering that many of the mines immediately adjoin each other, and the bounds are only marked out above, it is astonishing how few instances occur of the miners employed in one mine breaking through their limits into the sett of their neighbours. The property of the soil above is entirely distinct, but the lessees of the sett have the privilege or right of sinking such shafts as may be necessary for the effectual working of the mine, and for which they pay what is termed "surface damage."

In commencing a mine from the surface, it is first ascertained, as near as possible, the situation and direction of the lodes, or veins of ore, which is generally done by costeaning, or digging pits in different parts of the sett. By this means, the best situation is found for sinking (or, as it is called in Cornwall "placing") the shaft, so as to take the lode at a certain depth. The shaft is generally sunk about 20 or 30 fms., according to the nature of the ground, when a horizontal level, or gallery, called an adit, is driven east and west, for the purpose of ventilating the mine, and for drawing off the water as the shaft gets deeper. [In some lead mines, where the object is to prove their value as quickly and economically as possible, shafts are sunk on the course of the lodes.] At every 10 fms. the shaft is sunk, similar levels to the adit are driven east and west; these levels being again subdivided by small winzes, of about 10 fms. in height, and 16 fms. apart, the mine becomes finally divided into pitches. The engine-shaft is always sunk to a greater depth than the lowest level, in order to keep the working shaft free from water. The object of the shaft and levels is to get at the ores, and put the lode into such a state, that it may be worked conveniently by a number of men. The ore, when broken from the lode, is wheeled in barrows along the levels to the shaft, and then drawn to the surface by an engine; and the winzes, besides forming communications from one level to another, ventilate the mine. The shaft is generally timbered for 30 fms. in depth—sometimes the whole way, depending on the nature of the ground; the timber used is Norway pine, and it is estimated that 50,000*l.* worth is annually used in the mines. The levels generally are 3 feet wide, and 6 or 7 feet high. The shaft having been sunk in the manner described, the water is pumped out of the bottom levels, by means of a steam-engine, into the adit, which carries it off, either into the nearest valley, or into the sea.

The great Cornish Adit is a most extensive and valuable undertaking, and has but few in the world to exceed it in importance. Its commencement is near the village of Ferney Splat, in the Carnon Valley; and its longest branch extends to Cardrew Downs Mine, which is nearly 5½ miles from its mouth. One branch of it unwaters the Consolidated and United, and other mines, as far westward as Ting Tang; a second extends through Poldice, Wheal Unity, Wheal Daniel, and Wheal Jewel, to Wheal Hope; a third reaches Chacewater Mine, and thence through North Downs, Wheal Chance, and Treskerley to Cardrew Downs. In 1819, Mr. Thomas estimated the total length of its various ramifications at nearly 30 miles; and it has been considerably extended since—so that its present length is probably rather over than under 35 miles. In the shallowest parts it is not more than 12 or 14 fms. deep; whilst, in one instance, at Wheal Hope, it is 70 fms. below the surface; its average depth may probably be from 35 to 40 fms. More than nine-tenths of its extent is in the slate formation; the extremities of all its principal branches, however, enter the granite. It intersects most of the elvan courses, and by far the greater number of the lodes and cross veins of the district. Allowing a tract of 200 fms. in breadth, outside the limits of its ramifications, to be drained by it, the area it unwaters may be computed at nearly 5550 acres. It has been computed that this adit effects a saving in the article of fuel alone of 19,000*l.* a year in the district it unwaters; as, were it not for this adit, the additional steam-power that would be required to draw the water to the surface, which is now only drawn to the adit, and intersected by it in its descent, would require an annual increase of 24,000 tons of coal. This undertaking was commenced in the year 1748 by the ancestor of the Messrs. Williams, of Scorrier House; and it has conferred on the neighbourhood a benefit unequalled by that of any other public undertaking in Cornwall.

The valleys of Cornwall are not deep, and there are few instances where ore is raised from or above the adit level, to pay for the future operations of the mines, and seldom more than a 40 fm. adit can be obtained.

After the shaft has passed through the lode, and the first level run, as the lode descends with an inclined plane, or dip, more or less, in order to find it at the next descent, the shaft is continued, and cross-cuts made every 10 fms. to reach the lode, which, being divided into pitches, each pitch is let to a tributer, who, with his *pare*, or gang, break, raise, and pay for dressing the ores, the weekly or monthly produce being made into heaps of about 100 tons each. Samples of these are sent to assayers, to determine the value according to the produce, or quantity, of fine copper contained in 100 parts of ore; and the samplings are then sold at the weekly ticketings, and the tributers receive a certain share of the value of the ores for their labour.

The estimated rate of wages for the county is as follows, per month:—Tributers, 2*l.* 15s. to 3*l.* 11s. 7d.; tutworkmen, 2*l.* 10s. to 3*l.* 1s. 11d.; surface labourers, 2*l.* 2s. to 2*l.* 5s.; boys, 13s. to 1*l.* 8s.; and females, 12s. to 18s. I imagine this rather exceeds the present rate. And the proportions in 100 persons employed in a mine, is 30 tributers, 20 tutworkmen, 10 surface labourers, 25 boys, and 15 labourers. The tributer may not for many months earn a remunerating profit, but if the indications of the lode be favourable, he will at every setting renew his bargain, in the hope that the lode may eventually become rich. If before the completion of his term, his expectations be realised, he and his *pare*, or gang, are often able to work out ore to the value of 60*l.* or 100*l.* each, sometimes more; but at the next renewal the rate of tribute is re-adjusted, and fair wages earned until the ore fails.

ON THE NATURE OF VEINS.

Most rocks are traversed by fissures, and which, when they contain minerals, are called *veins, lodes*, or *courses*. In regard to accurately describing them, Mr. Carne has determined—By a *lode* is meant a metalliferous vein. By *east* and *west lodes*, metalliferous veins whose direction is not more than 30° from these points. By caunter *lodes*, metalliferous veins whose directions are from 30° to 60° from east and west. By *cross-courses*, veins whose direction is not more than 30° from north and south. By *flookan veins*, veins of whitish or greenish clay, generally argillaceous. By *cross flookans*, veins of this clay having the same direction as the cross-courses. By *slides*, veins of slimy clay, greatly inclined, having generally an east and west, and rarely a north and south, direction. The metal contained in these veins is generally found combined with other substances, and is, therefore, called *ore*. Veins or lodes run to a considerable extent, sometimes for several miles, and have, in no instance, been followed to an actual termination, being always relinquished when no longer worth working; their direction, or dip, downwards generally forms an angle of 70° or 80°.

If a lode continues in a straight line, it is called a regular lode—if it occasionally swells and contracts, an irregular lode, or a pipe vein; the wider parts are called *bunches*; and when it divides into branches it is said to *take horse*, or come into dead ground, leaving a branch of ore on either side. When a vein *takes horse*, it is generally considered a good indication, for (as the miners say) at the tail of the horse, there are generally some rich bunches of ore. Sometimes a vein called a *cross-course* interferes, and *heaves* the regular lode, from 2 feet to 50 fathoms, out of its course; or it becomes reduced to a mere thread, and reappears at a distance. A cross lode in Wheal Peever, about three miles east of Redruth, extends from sea to sea. On its west side every vein it passes is heaved 50 fathoms farther north from the line it would have otherwise pursued, and which the other part still keeps. It was not until after a search during 40 years, that this heaved lode was discovered; for, until mining became so general, the heave of a lode by a cross-course greatly puzzled the miners. At present, they find little difficulty on such occasions, as, even when an individual case furnishes no means of ascertaining the direction in which the lode has been heaved, they have, in almost every part of the mining districts, precedents by which they are enabled to form a tolerably correct judgment on the subject.

The most abundant substance in veins is crystallized spar, termed veinstone, or the leader of the lode; the veins are distinguished by names, according to the nature of the veinstones. The following are the principal:—1. *Gossan*, when the veinstone is clay, mixed with silica, and oxide of iron. Its colour varies from light yellow to deep brown. This is the most common veinstone, and is considered as promising, both for copper and tin.—2. *Spar*, when quartz predominates; it is rather unpromising.—3. *Mundicy*, when iron pyrites abounds; it is considered as rather promising.—4. *Peachy*, when the veinstone is chlorite; it is more promising for tin and copper.—5. *Flookany*, when one or both of its sides is lined with bluish white clay.—6. *Capely*, when the veinstone is a hard substance of a greenish or brownish colour, chiefly a mixture of chlorite and quartz; tin is found in it, but seldom copper.—7. *Prian*, when the ore is found in detached lumps.—8. When a vein abounds in blende it is called a *black jack lode*; when it contains granite it is called a *growan lode*. Tin and copper lodes generally run east and west, and lead lodes north and south. The veins in Cornwall have no determinate size, being sometimes very narrow, or exceeding several fathoms in width; extending sometimes to a great length and depth, or terminating after a short course in either direction. Their width varies from that of a barleycorn to 36 feet, only one, however, has been found in Cornwall of the latter width, and that for only 20 fathoms in length, in Relistian; the average width may be stated at from one to four feet. As regards their form, they are occasionally, though rarely, contained within parellel and regularly-inclined sides or walls; but are continually varying in width, both on the line of their course and of their inclination, partaking often of the same undulating, and even curved form of the rocks which they traverse; moreover, they are accompanied on either side by innumerable branches, which extend in various directions. And, lastly, a parallel series of veins frequently meet a cross vein, either on the line of its course, or of its dip; some of these veins continue their direction on either side of the cross-vein, whilst others, on the opposite side of the cross-vein, abruptly disappear on the line of their original course, and are often found at some distance therefrom, but running in a parallel directton.

Veins vary very much in their composition; in general they consist entirely of earthy minerals, which, indeed, even when the veins are metalliferous, constitute the greater part thereof, the ores seldom being continuous for any considerable distance, but being scattered and disseminated throughout the matrix in short irregular veins, layers, branches, granules, crystals, and smaller forms; sometimes indeed, but rarely, except in very small veins, the ore entirely prevails.

On the kindly appearance of lodes, Mr. Henwood says, "All the harder rocks in the mining districts are quartzose, and whether they are granite, elvan, or slate, this character is unfavourable. A distinctly crystalline structure of granite, and their slaty texture, and high inclination in slate (killas) is also discouraging, but a soft nature, both in granite and slate, and in the latter, the moderate thickness of the beds, and the slight inclination of the laminæ, are encouraging features. The veined and bedded structures of lodes, and their frequent curvatures, are not inviting, neither are they rich when having a flat underlay. The quartzose, and generally speaking the smaller portions, are not so rich as those which consist of softer materials, and are of larger size. The occurrence of gossan in the superficial parts, and the frequency of bunches of ore near cross veins, are generally considered beneficial.

[*To be continued in next week's Mining Journal.*]

QUEBEC MINING COMPANY.—A Quebec paper gives the following information from an authentic source respecting the prospects of this company on Lake Superior:—The company's mine, named Patterson's, is at Mica Bay, Point aux Mines, 50 miles from Sault Ste. Marie. From June last up to the 24th of Aug. there had been extracted and brought to the surface, from Patterson's Mine, 1000 tons vein stuff (ore before it is washed and crushed). As the work progresses, samples of different qualities, including the poorest and the richest, are selected every fortnight, and crushed, washed, and assayed. The average produce of these samples, in fine copper, gradually increased from 2 per cent. in June to 5 per cent. in August; and, from the greater facilities for extraction afforded by a larger space for working, the vein stuff increased from 100 to 300 tons per month. The average produce of the vein stuff is expected shortly to reach 7 per cent. of fine copper, and the quantity raised 600 tons per month. At the present average of 5 per cent., the quantity already extracted, of 1000 tons, will produce 50 tons of fine copper; which, on reference to the last London and New York Mining Journals, will be found, by the former, to be worth 98*l.* 10s. sterling per ton; and by the latter 22 cents per lb., or $492 per ton. The expenditure of the company for plant, &c., has been 43,686*l.*, to repay which it has sufficient vein stuff (not in anticipation, but actually in sight) to produce a sum of 142,000*l.* It will require, it is true, two years to extract this enormous produce; but it is satisfactory to know that the point at which risk ceases in the hazardous adventure of mining has been reached at Patterson's Mine, and passed.

THE LLYNVI IRON-WORKS, MAESTEG.—The situation of furnace manager has recently been conferred upon Mr. W. Anthony, who, for many years past, has been a respectable inhabitant of Swansea, having filled situations of trust both at the Maesteg and Llynvi Works. Mr. Anthony was, in 1844 or 1845, appointed to superintend the erection of the forge and mill at the last mentioned works, the accomplishment of which task reflects great credit on the skill and judgment of a man comparatively inexperienced in such matters—that being Mr. Anthony's first effort as a fitter-up. It also tended to raise him in the estimation of his employers, as a person well deserving of their confidence, and one on whom might be safely conferred other offices of importance and responsibility. The appointment cannot fail to be gratifying to Mr. W. Anthony himself, while it furnishes an example of what a Welshman can accomplish by dint of perseverance, industry, and good conduct.—*Local paper.*

LEAD MINES OF MATLOCK.—These mines have been, for many years, doing very little, owing to their progress being stopped by water, and many of the veins, which have been very productive, being obliged to be abandoned for want of some power to drain them. There appears now some chance that this desirable object will be obtained, as we understand a powerful company is contemplated to relieve several mining districts, and also make some valuable trials, which the miners have not been able to do themselves. It is expected that this company will be speedily formed, in a considerable number of shares, of small amount. Our whole mining districts have been, comparatively speaking, doing nothing; and should this plan be carried out, a complete renewal of the veins, at a greater depth, is confidently expected, and which can now be done by the great improvement in the steam-engine, and the greater facility of getting them supplied with coal by means of railways, which our forefathers could not do.—*Derby Reporter.*

A coffer dam has been for some time in the course of erection in the middle of the Derwent, at Matlock, where it is intended the Manchester and Matlock Railway to cross by a bridge, and the miners and others in the course of their operations discovered recently, in a blue clay, under 4 feet of gravel, at the bed of the river, a number of fragments of horns, in a good state of preservation, evidently once belonging to some large species of stag. The depth at which these remains were procured, reckoning from the surface of the water, is about 19 feet, 11 of which is water. Portions of the horns are in possession of Mr. Campbell, engineer, Matlock, and of Mr. Benjamin Biram, of the heights of Abraham, Matlock.—*Derbyshire Reporter.*

NORTH STAFFORDSHIRE RAILWAY.—This line, from Crewe to Burton, will be opened for the conveyance of goods and passengers on Monday next, the 9th inst. Notices to that effect have been published by the company.

Mining Correspondence.

ENGLISH MINES.

ANTIMONY AND SILVER-LEAD.—Capt. C. Williams (Oct. 3) reports We have cut the lode in the lane; it is 7 ft. big, composed of can, mundic, and ore—the most promising lode yet discovered in the sett; we have, however, another large lode, a little above, which we shall now open; the first of these is 30 fms. from the end of the Marlborough adit.

BARRISTOWN.—Capt. Thomas Angove (Sept. 22) reports—The lode in the 16 fm. level end east is still regular, and producing about 6 or 8 cwts. of lead per fm., it is under a broken floor of ground, about 2 fms. in thickness; this end west is poor. The adit end east is producing from 1 to 1½ ton per fm., and looking very regular in back and bottom for about 8 fms. behind it. We shipped 30 tons of lead ore yesterday.

BEDFORD UNITED.—Capt. James Phillips (Oct. 4) reports—At Wheal Marquis, our progress in the engine-shaft has been much retarded, owing to a hard floor of spar. In the 80 fm. level east the lode is 3 ft. wide, producing good saving work; the lode in Tiller's winze, in this level, is 18 in. wide, producing good stones of ore. There has been no lode taken down in the 70 fm. level east. We weighed at Morwellham our parcel of July ores, 100 tons 16 cwts. 2 qrs., and sampled August ores, computed 103 tons (21 cwts.).

CWM ERFIN.—Capt. S. Nicholls (Oct. 2) reports—In the 20 fm. level, west of the engine-shaft, there is not much change in size since last reported; but it is better for lead, and there is a great deal of copper mixed with it. In the stope, west of the engine-shaft, the ore decreases as we go west with the stope, but the men are coming back, to sink afresh in the ore ground. We have not yet met with any indications of a lode in the 10 fm. level cross-cut; we have met with the lode in the western hill; it is small, similar to that in the eastern hill; it carries some black peach, but I cannot see any lead. The tribute pitch, east of the whim-shaft, is looking very well. The pitch from the engine-shaft to the whim-shaft is given up.

DEVON AND COURTENAY.—Capt. N. Seccombe (Oct. 3) reports—In the end driving west, in the 40 fm. level, on the gossan lode, the lode is 20 in. wide, composed of spar, mundic, killas, and small branches of ore interspersed. In the end driving west, in the 50 fm. level, the lode is 2 ft. wide, composed of spar, mundic, and spots of ore. The lode on which I put the men to open last west of the cross-course, in the 50 fm. level, still continues large, and is composed chiefly of spar, also good stones of ore.

EAST CROWNDALE.—Capt. S. Paull (Sept. 30) reports—Diamond's engine-shaft is now down 17 fms. 1 ft. 6 in., which being the level of the adit, we are now going to commence cutting a plat, and driving east on the course of Thomas's lode—set to drive, 7 ft. 6 in. high, and 6 ft. wide, at 5*l.* per fm. The adit level, driving west, on the course of Thomas's lode, is improved in the course of the past week; the lode is 14 ft. wide, 3 ft. on the north side being composed of gossan, flookan, mundic, and killas, with small veins of tin in the middle, and 4 ft. on the south side, composed of peach, prian, mundic, and tin, and worth 45*l.* per fm. The end is set to drive 7 ft. 6 in. high, and 4 ft 6 in. wide, at 55s. per fm., the remaining part of the lode to stope off, at 45s. per fm., solid measurement. The stopes in the back of this level continue without much change; the lode is near 8 ft. wide, composed of peach, killas, prian, mundic, spar, and tin, worth 20*l* per fm. The ground in Thomas's shaft is still favourable for sinking, and the appearance of the part of the lode we are carrying is much improved in the past week, it is composed of peach, prian, iron, killas, and, at times, excellent stones of tin—set to sink at 5*l.* per fm. I have set to cut into the north and south side of the adit level, on Thomas's lode, in order to prove satisfactorily the size of the lode.

EAST TAMAR CONSOLS.—The manager (October 4) reports—I beg to enclose a list of the settings for the current month. Having so recently reported on the state of the mine, it is not now necessary, perhaps, to enter fully into the state of every bargain and pitch; I will, therefore, briefly remark, that the lode in both ends in the 60 fm. level, is looking very well, and yielding about 8 cwts. of lead per fm. In the 46 end north the lode is at present smaller than usual, but will turn out about the same quantity of lead as before; in the south end, in the same level, the lode is improving, and indicating a change for the better. The shaftmen have made great progress during the past week, and we expect they will complete their next stent in less time than we anticipated. The pitches are yielding a fair quantity of lead, and at the present prices the men can get wages. The water is not yet drained from Charlotte's shaft, and I fear, owing to the wetness of the season, we shall be compelled to clean up Church Lane shaft, before we can get to work on the lode in the 11 fm. level under the deep adit.

EXMOOR WHEAL ELIZA.—Capts. W. H. Whitford and Thomas Dunn (October 5) report—We are progressing favourably in sinking our engine-shaft, considering the disadvantageous circumstances against which we have to contend, and over which, at present, we have no control. When we drop our large lift, our difficulties will considerably lessen—consequently, our progress will correspondently increase. Should the necessary materials be forwarded to the mine in the early part of next week, which we duly expect, we shall be in a position to set the lift, before referred to, to work on or about the 16th of October.

GREAT MICHELL CONSOLS.—Capt. T. Richards (Oct. 4) reports—The lode in the 45 fm. level, west of the sump winze, contains mundic, spar, and fluor, with good stones of ore in places. In the 35 fm. level west, the lode has much the same appearance, containing mundic, capel, spar, and prian, with a small proportion of black and yellow ore.

HOLMBUSH.—Capt. W. Lean (Oct. 3) reports—The ground in the diagonal shaft is favourable for sinking, and is deep enough to enable us to fix the lift in the 32, which we are preparing to do. The lode in the 132 fm. level west is 20 in. wide, composed of spar, spotted with copper ore and mundic. The lode in the 120 fm. level south is 4 ft. wide, composed of quartz and stones of lead, as well as some of the pitches. The lode in the 110 fm. level south is 3 ft. wide, producing 3 cwts. of lead per fm.; the lode in the stopes, in the back of this level, is 4½ ft. wide, producing saving work. The lode in the 100 fm. level south is 2½ ft. wide, composed of soft spar, prian, flookan, and lead, worth 3*l.* per fm.; in the same level east, on the Flap-jack lode, we are often intersecting small cross-courses, but as yet have not reached the main body of the great cross-course, but expect shortly to do so. We sampled on Friday last, at Calstock Quay, a small parcel of copper ore, computed 28 tons. In consequence of the great depression in the standard of that mineral, very many of our old pitches have been idle for some time past, and must still remain so until an improvement takes place—hence the reason of our diminished produce.

KIRKCUDBRIGHTSHIRE.—The agent (Sept. 30) reports—The lode in the 50 end, west of Stewart's, is still small, with occasionally a small branch of lead on the south side; the north lode, in the same level east, is 3½ ft. wide, with a branch of lead on the north wall, yielding 5 cwts. of lead to the fathom. The lode in Keith's shaft is still large (5 ft.), the south part of which has undergone a favourable change in the last day or two, there being some fine healthy-looking branches and stones of lead scattered through it. The lode in the 40 end, west of Keith's, is still kindly, with a small rib of lead on the south part, worth about 3 cwts. of lead per fm. The lode in the 30 end, east of Stewart's, is still very kindly, yielding from 8 cwts. to a ½ ton per fm. The *Mary* has arrived, and we expect to put the cargo on board on Tuesday next.

LAMHEROOE WHEAL MARIA.—Capt. J. Tabb (Oct. 4) reports—Our sinking in the engine-shaft is going on favourably, and the ground favourable and congenial for copper, and shall reach the 50 by the end of Nov., if the ground continues as at present. We are also sinking Davey's shaft very satisfactorily, and shall reach the 40 fm. level some time within this month—we shall then drive north, to cut K and other lodes.

LEWIS.—Captain S. S. Noell (Sept. 30) reports—The lode in the 70 east is 2 feet wide, saving work for tin, and very promising; in the 70, west from the sump-shaft, on the south branch, the lode is 6 in. wide, and worth 7*l.* per fm.; the ground in the 70 south, west from the sump whim shaft, is hard. The lode in the 60 east is 3 ft. wide, composed of a soft spar, mundic, peach, &c., with some spots of tin; the lode in the 60 east, on the south branch, is 1 ft. wide, and worth 8*l.* per fm.; in the 60 west, on the south branch, the lode is 1 ft. wide, and worth 6*l.* per fm.; the lode in the winze, sinking under the 60, is producing some good work for tin; the lode in the 60, east from copper ore shaft, on Ralph's branch, or main lode, is 9 in. wide, opening good tribute ground; from the underlay and bearing of this lode I expect it will intersect the main lode at the 70, at or about copper ore shaft, where I anticipate finding it very productive. The lode in the 50 east, on south branch, is 6 in. wide, yielding good quality work; in the 50 east, on Ralph's branch, or main lode, the lode is 1 ft. wide, worth 3*l.* 10s. per fm. In the 40 east, on south branch, the lode is 4 in. wide, opening ground that will work at or about 10s. tribute; the south lode in the 20 east is at present small, and disordered by a slide.

MENDIP HILLS.—Capt. F. C. Harpur (Oct. 1) reports—The almost daily rains throughout the greater part of last week has somewhat impeded our progress in the slag department; I am, however, glad to say, it is now much more favourable, I intend lighting the furnaces to-morrow morning, and hope to get a sufficient quantity of slags to keep them engaged during the present week. In the slag ground the beds of stuff through which we are laying open the cutting continues about 14 ft. thick, presenting much the same appearance as when I last reported, some parts of which being worked on fair quality. The lode in the 38 fm. level is about 2 ft. wide, composed of flookan, white spar, and a little iron ground—rather hard for driving.

POLSAITH CONSOLS.—Capt. N. Faull (Sept. 29) reports—The shaft at Turner's Hill is sunk 12 fms. from surface, and the lode cut into and driven in the north about 12 fms., averaging about 8 fms. in width, composed of gossan and quartz of the most promising description, with occasional stones of lead, 2 cwts. weight in a stone, embedded in gossan. We ought to lose no time in sinking the shaft 10 or 12 fms. deeper, when, from its present underlie (about 2 ft. in a fm.), it is calculated the lode will be found to be in the shaft, when, if, as probable, we get into settled ground under the gossan, there is every reason to believe it will yield an abundance of lead. Several experienced miners have seen the lode, and declare it no speculation, but thought it certain to yield a quantity of lead; in this property it runs about 500 fms. in length. At Trebetherick, the shaft is sunk 12 fms. below adit; the adit, where the shaft is sunk, is about 12 fms. below surface. The lode is cut here, and driven 7 fms. north; the lode, when first cut, was disordered by a slide, which is not yet out of the end. A pitch is now sinking in the back, producing about a ton to the fm.; this is above the slide; there is no doubt that it will be as good under the slide. The south end is driven 6 fms., and a winze sunk from the adit for ventilation. The first 3 fms. driven was disordered by the slide, which dips north; it then made lead in the bottom, and, as the slide left it, made lead upwards, with a kindly end, at present making lead also; in the back here the level has produced about ½ ton to a fm., with a very good branch of lead gone down in the bottom of the level for the last 3 fms. driving. From want of ventilation, the driving of this end has been suspended for several weeks while the winze was sinking. The lode in this part is about 100 fms. in length. From the adit level above, and south of our present end, there was a large quantity of lead raised, the back wrought, and in some places sunk as far as they could for water. The adit is driven 40 fms. south of our present end, all through lead ground. I fully believe there is no better speculation in this county, than Polsaith Consols. Our engine is keeping, and will keep, the water from both mines to a good depth, consuming only 400 cwts. of coals in a natural day.

SOUTH WHEAL MARIA.—Capt. G. Francis (Oct. 5) reports—The water continues to increase in the south cross cut as we approach towards the lode. Having driven some fathoms more than we at first calculated on without intersecting it, it is more than probable that the caunter lode has heaved it south—the cross-cut being about 8 fms. to the west of the caunter; but as it is evident that we are near the lode, a short time will decide it.

SOUTH WHEAL TRELAWNY.—Captain W. Lean (Sept. 30) reports—Since mine of the 25th inst., in continuing the 30 fm. level cross-cut west from the shaft, we have intersected the main part of the lode, about 2½ ft. from that part then reported on; it is 2 ft. wide, composed of can, mundic, prian, and a great quantity of barytes, with crystals of copper, and fine particles of lead scattered throughout every part of it: it is nearly perpendicular, and making a smooth western wall, and it is now plainly to be seen that these two parts will form a junction in a short distance, both north and south of the cross-cut, from their present direction. We have opened about 10 ft. on its course, and the indications are such as to make us believe we shall have a productive lode in depth, and that partial bunches of lead will be found in the present level, which we have set this day to drive north, at 40s. per fm., and south at 50s. per fm.—ground that will stand without being timbered: there is a great deal of water issuing from both ends; and our opinion is, that no time should be lost in sinking the shaft by 8 men, which can be done at the rate of 3 fms. per month, as well as to drive the 30 fm. level north and south, which work we hope you will sanction our carrying out.

TRELEIGH CONSOLS.—Capt. W. Symons (Sept. 29) reports—Garden's shaft, below the 100 fm. level (12½ fms.), we have a part of the south lode in the shaft, about 2 ft. wide; the remainder of it has gone out of the shaft to the north; in this we have but little mineral. The 90, east of Garden's cross-cut north, to cut another part of the lode, which we are working on west of this, at 2s. in 1*l.*; we have from 4 to 6 ft. more to cut it. In the 80, west of ditto (new), the lode is 2½ ft. wide, but little ore—it has a favourable appearance. In the 70, west of ditto, the lode is 2 ft. wide, with occasional stones of ore, not to value. In the winze sinking below the 60 west, the lode is 2 ft. wide, no mineral; we have about 4 ft. more to hole, when the same men will resume the 60 end west, which is set at 3*l.* per fm. In the 50, west of ditto, the lode is 2½ ft. wide, with stones of ore only; it has a more favourable appearance than usual. Wheal Parent engine-shaft, below the adit, is sinking in the country, 12 fms. 3 ft. below the adit. The adit north of ditto is suspended. East from the adit, on the middle lode, the lode is 8 in. wide—but little ore.

WEST WHEAL JEWEL.—Capt. R. Johns (Oct. 2) reports—In the 70 fm. level, west of William's cross-course, on Wheal Jewel lode, the lode is unproductive. In the 57 fm. level, west of ditto, on the same lode, the lode is worth 4*l.* per fm.; in this level, east of ditto, on the same lode, the lode is worth 3*l.* per fm.; in the rise in the back of this level, west of ditto, on the same lode, the lode is worth 5*l.* per fm. In the 47 fm. level, west of ditto, no lode has been taken down in the past week. In the deep adit, west of Hodges's cross-course, on the same lode, no lode has been taken down in the past week. In the 30 fm. level, west of Quarry-shaft, on Tolcarne tin lode, the lode is 18 in. wide—unproductive. In the deep adit, west of Quarry shaft, on the same lode, no lode has been taken down in the past week. The stopes in the back of the 12 fm. level, east of Pryor's winze, are now working on tribute—worth 20*l.* per fm.; the stopes in the back of the same level, west of ditto, are now working on tribute—worth 27*l.* per fm.; the stopes in the bottom of the same level, are now working on tribute—worth 25*l.* per fm.

WHEAL BENNY.—Capt. J. Tabb (Oct. 5) reports—The cross-cut south have not as yet intersected the lode, but expect to cut it shortly. In the 30 fm. level, at Ford shaft, we shall have about 8 fms. to drive north to intersect that lode.

WHEAL MARY ANN.—Capt. Peter Clymo, jun. (Oct. 2), reports—The lode in the 50 fms. level, south of the boundary, is 1½ ft. wide, and worth 4*l.* per fm. The lode in the 40 fm. level, south of Barratt's shaft, is 2½ ft. wide, and worth 10*l.* per fm.; the lode in the 40 fm. level, north of Pollard's shaft, is 2 ft. wide, and worth 8*l.* per fm.; the lode in the same level south is 2 ft. wide, and worth 4*l.* per fm. The lode in the 30 fm. level, south of Pollard's shaft, is 1½ ft. wide, and worth 7*l.* per fm. All the stopes are looking well.

WHEAL SARAH.—Captain J. Spargo (Oct. 4) reports—In driving to cut the western lode, we have intersected the capels. I expect, in a day or two, to cut into the lode; the ground is favourable. We have all but finished our wheel-pit, in order for the masons to commence building. We are bringing up an adit to the old shaft, which will come in from 6 to 7 fms. deep, and will be of great advantage, as the water will serve for dressing, after which it will pass over both wheels, as well as save the expense of pumps. We shall complete it in about eight days from this date, if the ground continues favourable, and by that time we shall be in readiness to commence forking the water.

WHEAL TRELAWNY.—Captain John Bryant (October 3) reports—At Phillips's shaft the ground is still favourable in the 72 cross-cut, driving towards the lode. The lode in the 62 end, north of this shaft, is still large, yielding 16 cwts. of ore per fm.; in this level south the lode in the rise is 1 ft. wide, and worth one-third of a ton per fm. We have three pares of men stoping the bottom of the 52 fm. level north, in order to convey the water from Phillips's to Trelawny's engine, where the lode is worth, on an average, 12 cwts. of ore per fm.; the lode in the winze, sinking under this level, south of the shaft, is 2 ft. wide, and yielding 15 cwts. of ore per fm. The ground in Trelawny's shaft, and in the 22 cross-cut east, is very similar as stated in my last report; the lode in the 52 fm. level, north of this shaft, is 3 ft. wide, composed of spar, can, mundic, and lead, producing half a ton of ore per fm. The lode in the 42 fm. level, north of this shaft, is 2 ft. wide, composed of spar, can, and lead, worth two-thirds of a ton of ore per fm.; the lode in the winze, sinking under this level, is worth half a ton of ore per fm.; the stopes throughout the mine are yielding a fair quantity of ore. At the north mine, the lode, in the 30 end, north of Smith's, is 2½ ft. wide, composed of spar, can, capel, and lead, worth 4*l.* per fm.; there is a great quantity of water issuing out of this end, which has considerably increased the water at Trelawny's engine.

WHEAL TRESCOLL.—Capt. John Webb (Oct. 3) reports—Our engine-shaft is down 10 fms. below the adit, and our sumpmen have begun to drive to cut the B lode, No. 1, which we hope to do in the course of a fortnight. We have had some difficulty at the bottom of the shaft, owing to a body of water breaking from a large cross-course, crossing all our lodes and quick ground; but our engine keeps the water remarkably well, with two lifts in breast. I think our lodes are a great deal larger at the 10 fm. level than at the adit level, on account of so much water breaking in the shaft. Our tributers have discovered a rich course of tin going down on the D lode, No. 1.; they went after it about 5 ft. below the level, whence they were driven by water, and left a lode, the leader of which was about a foot big, very rich; this part of the lode discovered appears to be a part of the D lode, No. 1, split, going east, that fell in with the D lode, No. 2, which made the course of tin east on this lode, towards the moors, where we have the course of tin in the end standing 15 fms. further east from where the tributers discovered it. Those tributers have also left a fine course of tin going down on the B lode, No. 2; we have also stoped 18 fms. over the B lode, No. 1, and find the lode very good, so we may expect a great deal of tin in the 10 fm. level, as we know we have four courses of tin on four different lodes, going below the adit, of great lengths. The B lode, No. 1, has been worked all away by the ancients, as far as the adit level, which indicates that it must have been a rich lode; and I think, from the indications we have at present, there is no doubt of cutting a rich lode at the 10 fm. level. Our stamps are working remarkably well, and the tin turning out to our expectation; we have a ton ready for market, and cleaning more every day. I have also to state, that the lords, last week, in levelling some old burrows, on a lode north of the present north lode, between the granite and killas, found a large tin-stone, weighing 6½ lbs., fit for the market, and, for cubes, I never saw their equal. This indicates that we have a rich lode between the granite and killas.

WHEAL VINCENT.—Captain J. Spargo (Oct. 4) reports—We have sunk on the course of the new lode as deep as we can go for water, and it appears to improve as it goes down. I broke, in the deepest part of the shaft, a large and most excellent stone of tin; it is a splendid lode. I have set the men to drive on the course of it, and they are breaking excellent work for tin. Our engine-shaft is sinking, to take this lode about 30 fms. deep; but we shall drive in the 10 fm. level, to which depth we expect to sink by the power of a horse-whim while the machinery is erecting; if the lode continues as rich in the 10 fm. level as in the bottom of the shaft, on the course of the lode (which is about 16 ft. from surface), it will pay extremely well. There is no material alteration in the south cross-cut since my last, only the country is of a blue nature.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

CARTHEW CONSOLS.—They are actively engaged here in putting the engine (66-inch) to work. The engine-house is covered in, and stack completed; the boiler in its place, as also cylinder in the house, and fixed, and everything ready for the reception of the bob. A smithy has also been erected, and the surface work appears to be progressing. The lode in the Valley shaft is said to be looking promising, but the wheel cannot be put to work, so as to explore the lode in depth, until the wet season sets in; in the meantime the adit level is being driven towards the old Legossick Mine, which forms a part of the sett, and will, in its course, intersect another lode, which has been seen at surface.

I have now the pleasure to inform you, that a highly important discovery has been made at Great Hewas Consols—a good course of tin has been cut in the back of the 36 fm. level, which, on opening, holds up and down the end, and is calculated to produce 100*l.* worth of tinstuff to the fathom.

GREAT WHEAL ROUGH TOR.—We understand they have cut through the south capel of the lode, and there is every promise of a course of ore at the intersection with the caunter further west; in cross-cutting to the lode a great many droppers or branches were visible, dipping from the lode, and there is no doubt on the minds of agents, that as they go deeper these droppers will dwindle away, and the orey part of the lode become much larger; there is already on the north part of the lode a good branch, chiefly of black oxide of copper, about 10 in. wide, while the remainder of the lode, 3 ft. wide, is spotted with copper. In the eastern shaft the water is very powerful, but the indications are very flattering. There is an elvan dyke a few fathoms to the north of the lode, which is considered a first-rate symptom of a rich copper lode.

NORTH WHEAL ALFRED.—It is said that a discovery has been made here, well calculated to cheer the adventurers, and repay their outlay.

PENHALE.—On visiting this mine, I found that the engine-shaft was down to nearly the 10 fm. level; and it is expected that, within three weeks, the plat will be cut, and a cross-course put out (2 fms.) to take the caunter (Stephen's) lode. Some delay has arisen with the engine; however, they have for sampling about 33 tons of 12 to 13 produce, besides some 50 tons of undressed ore, including halvans at grass—this is exclusive of lead ores, which, I should think, is about 16 tons dressed, and 25 to 30 tons in course. Some delay appears to have arisen from the absence of stamps, or a crusher, which, I understand, will, however, be erected without further loss of time, as it is intended to put up a water-wheel, to be worked by the water coming from the mine—there not being any which can be commanded at surface; this will much facilitate the operations, and be a considerable saving in dressing the ore. The surface works with the engine (18-inch) are complete, and equal to a much larger output, which may be expected on the 10 fm. level being driven, and the ground stoped away to the adit level—the lode going down rich, as proved at one or two points. The north and south, or main, lode is looking well in the end, and the caunter, or Stephen's, lode, which produced some good ore, is somewhat disordered, but showing strings of ore in going east—the ore raised being of excellent quality.

PENTYRE GLAZE.—I am informed that, within the last fortnight, a discovery has been made, the lode having been cut rich, with a leader of 15 inches, solid for lead. This lode is in a direction to take the old Legossick Mine, it being considered as the identical lode which produced such large returns in the latter mine, when formerly worked.

CREEG BRAWS MINING COMPANY.

At a meeting held at the mine, on the 28th Sept., the accounts for June and July were presented, showing—To mine cost, 744*l.* 19s.; merchants' bills, 268*l.* 7s. 9d.=1013*l.* 6s. 9d.—By copper ores sold, Aug. 31, 938*l.* 6s.; tin and lead ditto, 25*l.* 0s. 4d—leaving balance of loss, 50*l.* 0s. 5d., to be carried to debit of next account. The following report, from Capts. Francis B. Blamey and Samuel Bawden, was read to the shareholders:—

We have a cross-cut driving south, in the 86 fm. level, to intersect the capel lode; we have about 14 fms. to drive; the ground is very hard, and is set to six men, at 8*l.* per fm. In the 86 fm. level we have driven east on the caunter lode about 3 fms.; the price per fm. is 11*l.*; the lode is 14 in. wide, and much improved, producing about 2½ tons of ore per fm.; we have commenced sinking the engine-shaft below the 86 fm. level; we expect to have the lode in the shaft in about 2 fms. more; the present price is 28*l.* for one fm. We have a winze sinking below the 76 fm. level; the lode is about 1 ft. wide, with good stones of ore in it; we have a new pitch in the bottom of this level, on the caunter lode, set at 4s. in 1*l.* by six men, worth 25*l.* per fm.; this pitch is about 45 fms. east of the now present east end of the 86 fm. level, on the same lode; another pitch in the bottom of the 76 fm. level, on the capel lode, set at 5s. in 1*l.*, by six men, worth 30*l.* per fm., is working well, and producing a great deal of ore; we have six pitches working in this level, with six men in each pitch. All the pitches are much the same. We expect to sample about the same quantity of ore as last sampling. We are also happy to say, that the mine is looking well in every respect, and every prospect of its being soon in a very flourishing condition.

LAMERHOOE WHEAL MARIA MINING COMPANY.

A special meeting of shareholders in this company was held at the offices, King-street, Cheapside, on Thursday last, the 5th instant.

P. DAVEY, Esq., in the chair.

Mr. CROFTS (the secretary), read the minutes of the last meeting, and the balance-sheet made to the end of July last at the mine, and to the end of August for London expenses, from which it appeared, that the entire receipts from calls, &c., amounted to 13,193*l.* 10s. 8d.; and that there remained a cash balance at bankers, of 127*l.* 15s. The entire assets in unpaid calls, office furniture, cash, &c., were 666*l.* 18s.; and liabilities, 405*l.* 10s. 5d.—leaving a balance in favour of the company of 261*l.* 7s. 7d.; and Mr. Crofts submitted a calculation which he had made, that, considering there would be no more forfeiture of shares, as the list had now been so well sifted, he came to the conclusion that the payment of another instalment would give the committee 700*l.*, between now and Christmas, for the prosecution of the mine, by which time they would be able to form a tolerably correct judgment of the value of the property. Mr. Crofts then stated, that at the last meeting, on the 12th September, there were 355 shares, on which the call had not been paid, divided among 21 holders. The purser had given each of these holders, notice that if the call was not paid by Tuesday, the 3d of October, they would be absolutely forfeited at the meeting, and he had given further notice to those who had not come forward by that day, that up to that day 175 had been paid upon, and 180 remained; 40 of these were held, however, by a Mr. W. T. Fraser, an East India merchant, who was now on his passage out, his pecuniary affairs were being settled by trustees; and he had been waited on that morning by a gentleman, to say, that if the meeting would not forfeit them, the amount should be paid on Monday. It was suggested that this would not be fair towards the others, and if one was given until Monday, the others should have the same leniency; and a conversation ensued, in which the chairman, and Messrs. Edwards, Crofts, and other shareholders took part; and, it was at length agreed that a specific resolution was not necessary, inasmuch as that of the former meeting made the shares absolutely forfeited, not having been paid upon by the 3d. inst., and the forfeiture was entered on the minutes, with the holders names, as follows:—In consequence of a resolution at a general meeting, held on the 12th September last, all shares held by parties who had not paid all calls due on them by the 3d inst., have become forfeited, agreeably with such resolution. A report from Capt. Tabb was then read to the meeting, in which, after some general remarks, he proceeded to say that the sinking the new shaft was proceeding satisfactorily, and that they should be down to a 50 fm. level by the end of November, if the ground continued as favourable as at present; that Davey's shaft was also proceeding favourably, and was expected to be down by the end of the present month. The writer then suggested, that as Wheal Benny shaft would be drained by their engine 10 fms. deeper, it would be fair for them to pay for driving the cross-cut, as in that case Benny adventurers would gain 10 fms. in depth at the expense of the cross-cut, and Lamheroe would have an opportunity of exploring the ground with only the cost of drainage. He further stated, that he had been offered good steam coals, on contract, at 13s. per ton, and it would be advisable to lay in a stock for the winter—the consumption had been from 25 to 30 tons per month, but would, probably, now reach 35 tons.

The accounts were then passed, and a vote of thanks having been voted to the chairman, the meeting separated.

For the resolutions, see our advertising columns.

TRELEIGH CONSOLS MINING COMPANY.

The annual meeting of shareholders in this company was held at the offices, Old Broad-street, on Wednesday, the 4th inst.

G. B. CARR, Esq., in the chair.

Mr. NICHOLSON (the secretary), read the advertisement convening the meeting, and the following directors' report:—

This being the annual meeting, the directors have to submit the following report:—Since the last quarterly meeting, held on the 3d July, little, if any, variation has taken place in the prospects of the mine, nor can any improvement in the standard be quoted. The disturbed state of the continent having caused a stagnation in the copper trade, and a consequent depression in the former; recently, however, some purchases it appears have been made of fine copper for exportation, which it is hoped may lead to a more extended demand, for it must be evident that, unless a vent be opened for the large stocks now on hand, no permanent advance in the price of ores can be looked for. It will be in the recollection of the meeting, that Christoe shaft had been sunk to the 120 fm. level, when they had commenced to drive a level east to cut the lode. This was accomplished about the middle of July, but, after having been extended on for several fathoms, proved unproductive, though large. The directors deemed it prudent, therefore, having in view the reduction of working cost generally, and especially as the pitches in that part of the mine could not be wrought to a profit at the present low standard, to suspend all operations in that quarter for the present, and to disengage the flat-rods from Garden's engine. It can, however, be resumed hereafter at a trifling cost, all the pit work still remaining in the shaft, should circumstances warrant an inducement to do so; some reduction has

also been made, both in the tutwork as well as surface cost, west of Garden's shaft. It was not without reluctance that the directors were induced to carry this measure into effect, for it must be borne in mind, that it is by sinking shafts and driving levels that discoveries are made; hence, it will be obvious that, while on the one hand a saving is effected in the monthly cost, on the other the chances of further discoveries are of necessity lessened. The directors, however, are not singular with regard to this step, as the depreciated standard has been the cause of other companies contracting their operations, until improved times should enable them to realise a better price for their ores. The expenditure on the mine has also been further augmented, as you are aware, by the removal and erection of Maria engine upon Wheal Parent shaft; but, as the principal part of the outlay has already been incurred, this will shortly cease. A report from Capt. Richards, the manager, will be read, as also the financial statement for the past year, to both of which the directors beg to refer. [This letter referred to the weekly report, which will be found in the usual place; and also stated that, in the 90 fm. level, they had driven north, and discovered a lode 4 ft. wide, 2 ft. of which was very good ore, and worth 40*l.* per fm.; this, it was hoped, would open good tribute ground. It appeared to be the same shoot of ore they had in the 80 fm. level, dipping east. Christoe department being poor was suspended, and in Wheal Parent shaft the ground continued favourable. Captain Richards hoped to find a good lode in the next level, 114 or 115 fms., and that the 90 east would turn out good; these, in addition to the side lodes, holding out very favourable prospects, if a good price could be obtained for the ore, he had no doubt of resuming dividends in a few months.]

The statement of accounts were as follows:—

Balance at last meeting	£3892	19	10	Cost	£7348	1 2
Copper ore sold	8222	17	2	Dues	665	6 6
4th call received on 70 sh...	17	10	0	Dividends	2798	15 0
Spare materials sold	46	0	3	Reserved fund	275	0 0
				Rent, salaries, &c.	351	14 7
				Balance in hand	680	10 0
Total	£12,119	7	5	Total	£12,119	7 3

The statement of assets and liabilities showed—assets, 1566*l.* 5s. 6d.; liabilities, 1065*l.* 7s. 2d.; and a reserved fund in hand of 575*l.*, represented by 678*l.* 16s. 1d.—3 per Cent. Consols. Some little conversation ensued, the general opinion expressed being, that the mine was in an improving state, and the discovery at the 90 fm. level of very considerable importance; and, that should the mine improve, and there was every reason to hope it would, and a better price be obtained for their ores, the payment of dividends might be expected to be renewed in a few months. The report and accounts were then adopted, and a vote of thanks passed to the chairman, who replied, and the meeting separated.

BUDNICK CONSOLS.—At a meeting of adventurers, held at the mine, on Monday last, the accounts for July and August were examined and passed, showing—Balance last account, 502*l.* 10s. 5d.; costs, &c., 815*l.* 17s. 9d.=1318*l.* 8s. 2d.—By ore sold (less dues), 677*l.* 11s. 11d.; carriage of tin, 12*l.* 19s. 9d.; sundry receipts, 11*l.* 19s. 9d.=702*l.* 2s. 5d.: leaving a balance against the adventurers of 616*l.* 5s. 9d.

WHEAL BASSET.—At a two-monthly meeting of adventurers, held at the mine, on the 3d inst., the accounts were examined and passed, showing—Copper ores sold, July and August (less lord's dues, 125*l.* 1s. 2d.), 2876*l.* 2s. 7d.—By labour cost, 1153*l.* 16s. 11d.; merchants' bills, 984*l.* 17s. 4d.=1538*l.* 14s. 3d.: leaving profit, 837*l.* 8s. 4d., from which deduct balance due to purser, last account, 63*l.* 8s. 9d.: leaues balance of 773*l.* 19s. 7d., from which a dividend of 5*l.* per share was declared (640*l.*): leaves a balance in hand of 133*l.* 19s. 7d.

SALE OF MINERALS AND GEOLOGICAL SPECIMENS.

The immense collection of valuable effects at the princely residence of the Duke of Buckingham, Stowe-house (the disposal of which, by public auction, ends this day), included some of the rarest and most beautiful, of every description, in the country. The sale on Tuesday last comprised the following lots:—

The entire very celebrated collections of Mineralogy and Geology, formed by the Abbé Haüy, comprising nearly 10,000 specimens, each carefully labelled and described by his own hand, together with his very numerous models of crystals, elaborately cut in wood, to explain his particular system of crystallography; an extensive Hortus Siccus, in books, also formed and described by the Abbé; and to these collections has been added a beautiful series of the different varieties of amber. The whole forming a valuable and interesting illustration of the *Traité de Mineralogie*, published by the Abbé in 1822. The portrait of the Abbé Haüy will be included in this lot, as well as the glazed cases in which the specimens are now so well arranged and displayed.—[That this collection is interesting, as containing the specimens upon which Haüy founded his very ingenious system of mineralogy, it would be absurd to deny, but that it contains very much of a worthless character is equally true. It is an extraordinary fact, though only one of the many instances of profuse expenditure on the part of the late Duke of Buckingham, that he gave for this collection 4000*l.*—probably, about six times its real value. The collection was purchased in France of the executors of the Abbé Haüy; and the desire of the Government of that country to repossess it as the work of one of their most celebrated scientific men is perfectly natural. So little interest, however, did it occasion among our own scientific authorities, that M. Dufresnoy, who attended expressly to purchase it, was opposed for its possession by one bidder only—Mr. Hennell, of Southampton-row. The latter gentleman put it in at 100 guineas, from which sum it ran up to 320, M. Dufresnoy making the last bidding, and thus securing its possession.]

The "Buckingham Collection of Mineralogy and Geology," containing more than 6000 specimens—some of them of considerable rarity and beauty, systematically classed and catalogued, according to their names and localities—contains some very good minerals, and among them Mr. Cunnington's valuable series of specimens. This gentleman, it will be recollected, was the able coadjutor and assistant of Sir Richard Hoare. There was very little competition for this lot, and it was ultimately bought by Mr. Tennant, of the Strand, for the museum of King's College Hospital.

A very perfect specimen of the *Plesiosaurus dolichodeirus*, or long-necked lizard, found on the coast of Dorsetshire—one of the largest hitherto discovered. This was, in truth, one of the most marvellous antediluvian petrefactions we have ever seen. It was bought for the late Duke of Buckingham, by Dr. Buckland, for 100 guineas, and thought cheap at that price. It was purchased, under the same learned doctor's instructions, for the British Museum, at little more than one-tenth of the cost.

A collection of minerals, corals, sulphurs, &c., of great size and beauty, in a glazed case, on a marble table, was bought by Mr. Walesby for 17 guineas.

The splendour, variety, and value of the mass of sculpture, plate, paintings, and *bijouterie* collected by the Duke and his ancestors, have astonished all who were fortunate enough to inspect them at Stowe—its extent (embracing, besides the numerous works of art, so many historical treasures) may be imagined by its disposal occupying 40 days—the estimated produce being nearly 100,000*l.*; and we can fancy few more interesting volumes than that announced for publication, by Mr. Bogue, of Fleet-street, on the completion of the sale—viz.: "A Priced and Annotated Edition of the Stowe Catalogue, with descriptive notes of all the principal subjects, the names of the purchasers, and the price at which each was sold—interspersed with Anecdotal Reminiscences of the Sale. By Mr. Henry R. Forster."

GOLD IN CALIFORNIA.

The recent American papers contain some evidently exaggerated statements of a reported discovery of gold in California. The *Union* publishes the following extract of a letter forwarded from T. C. Larkin to the Navy Department, dated—Monterey (California), July 1.—"This part of California is at present in a state of great excitement from the late discovery of an extensive gold region on the branches of the Sacramento River. All our towns are becoming vacated. The gold is obtained on the surface of the earth, to 3 feet deep—the workman needing only a pickaxe and shovel to dig up the dirt, and a tin pan to wash it in. Many men, during the month of May and June last, obtained $5 to $30 per day. I have myself seen eight men (in a company), average $50 each per day for two or three days—I was with them. This gold is on public land, and has been found over a track of 100 miles."

The *Union* says that further details of this gold region have been received in Washington, and adds:—"We have had the pleasure of seeing Passed Midshipman Fitzgerald Beale, who arrived last evening in the southern boat. He brings despatches from Commodore Jones, and Mr. Larkin, our navy agent at Monterey, California. He left San Pas on the 1st of August, and travelled from the Pacific to Vera Cruz in the unprecedented short period of 10 days—from Mexico to Vera Cruz (275 miles), in 48 hours. His dispatches, and the accounts he himself brings, confirm what is said in Mr. Larkin's letter above of of this new El Dorado. There is said to be nothing like this gold region, recently discovered by accident. The mechanics are deserting the towns, the seamen the whaling vessels, in search of gold, which is said to be gathered over a large surface in great abundance."

The *Morning Star* thus reasons on the anticipated effects of the discovery:—"We regret that a rumour prevails of large amounts of gold having been found in California; and we regret it, apprehensive that people will abandon the industrious and safe road to wealth—abandon their future prospects and bright hopes—sacrifice their time and their means, by chasing a phantom, which, if even overtaken, will greatly disappoint its pursuers. There is no doubt great quantities of gold in Mexico and California; gold and silver abounds in that region, but does not necessarily make that country rich. Spain collected in Mexico and Peru sufficient gold and silver to pay the national debt of England *twice*, and yet Spain is the poorest country on earth at the present time. While she had power, and money is power, she gave law to all Europe. But in depending on gold and silver from America, and relying no longer on her own internal resources, Spain, in commerce, manufactures, and national influence, is a fourth-rate or fifth-rate power at present. We can imagine no greater calamity, than any country possessing mines of gold and silver—it is like a man grown suddenly rich, who will work no longer. Coal, iron, copper, and tin are valuable mines, because they require a less amount of labour to work, and are in the end more important, permanent, and durable, and the result is, the same coal, iron, and lead, in the end, turn to gold. So the discovery is the same. We advise all adventurers to California to seek for the coal and copper mines, and leave gold alone. The lands once secured, will become in time more valuable, for which purchasers will soon be found.

GREAT HEWAS CONSOLS.—We congratulate the spirited adventurers in this mine upon the splendid discovery of tin just made. We yesterday saw a specimen, cut in the back of the 36 fm. level—which, on opening, holds up and down the end, the value of which is 100*l.* a fathom.—*Penzance Journal, Oct.* 4.

MINING IN AUSTRALIA AND AT HOME.

SIR,—Several of your correspondents have of late directed attention to the large imports of copper ore from Australia, and to the effect likely to be produced on our home mines by this influx, added to the increasing produce of Cuba and Chili. There is no doubt but that vast discoveries have been made in that clime, and that at insignificant depths from surface—the returns from the Burra Burra Mine being held up as an instance, just as we might in this country quote the Devon Great Consols, Tresavean, Consolidated Mines, Carn Brea, or any others which have yielded vast returns to the adventurers on a comparatively insignificant outlay. Let us not, however, be led astray—"one swallow does not make a summer," and one successful adventure does not make a mining district. I will take your paper of last week, and see what are the returns, according to the expenditure and present value of the shares in the respective mines, and thus we shall arrive at a perfect result.

The mines quoted by you are—Burra Burra, capital paid up, 12,320*l.*; present value, 369,600*l.*—Princess Royal, paid up, 14,800*l.*; present value, 16,000*l.*—Mount Remarkable, paid up, 22,500*l.*; value, 17,000*l.*—Adelaide, paid up, 10,000*l.*; value, 6000*l.*—North Kapunda, paid up, 21,800*l.*; value, 6540*l.*—Royal Mining Company, paid up, 5000*l.*; value, 7000*l.*—Enterprise, paid up, 2000*l.*; value, 2500*l.*—Greenock Creek, paid up, 1000*l.*; value, 1800*l.*—Montacute, paid up, 5500*l.*; value, 5500*l.* Such is the list inserted in your paper, from which it will be seen, that one mine, with an outlay of 12,320*l.*, now represents 369,600*l.*; four other mines, with an expenditure of 22,000*l.*, are held to be worth 27,300*l.*; and the five remaining, on which 59,800*l.* have been spent, are of the market value of 35,040*l.*—thus showing that, with the exception of the great gun, or Burra Burra, there has been a *loss* on *nine* out of *ten* mines of 17,460*l.* It is to be observed, the Australian Mining Company, and the Barossa Range, with one or two more, are not included in the above list, but which would very slightly alter the figures, as I presume, at the time of the list being furnished, the prices of those shares were nominal, although an advance has lately taken place on the former, from discoveries having been made. Looking, then, at these figures, I must say that I do not despair of our home mines being worked successfully, if that we get but fair prices; nor is there any immediate prospect of their being swamped by the returns from Australia. It is true, that an outlay of 12,320*l.* at the Burra Burra Mines being now represented by 369,600*l.*—or *thirty* times the amount paid up—does appear a very large return for capital invested, and which forms one of the chances in favour of mining adventures; but, if we look at home, we shall find that the Devon Great Consols Mines, on which 102*l.* only have been paid up, were selling in the market at 850,000*l.* to 900,000*l.*—or *nine hundred* times the amount expended; and at this moment, after dividing full 180,000*l.*, and expending on the mines 60,000*l.* to 80,000*l.* in permanent works, are selling at upwards of 200,000*l.*, or two hundred times the amount of the expenditure. I think I have said sufficient to show to your correspondents, who so strongly uphold the mines of Australia, that we have something quite as good at home; and I recommend them to invest their money in concerns under their own immediate supervision, and encourage enterprise which will, doubtless, as has ever been the case, be attended with successful results.

I will conclude by merely noticing one or two mines:—East Wheal Rose, paid 50; quoted 800*l.* per share—North Pool, paid, 40*l.*; price 390*l.*—Carn Brea, paid 15*l.*; price 95*l.*—Wheal Seton, paid 214*l.*; price 650*l.*—North Pool, paid 45*l.*; price 390*l.*—South Caradon, paid 10*l.*; price 350*l.*—while Par Consols are quoted at 1000*l.* per share; Tresavean, 210*l.*; United Mines, 350*l.*; North Roskear, 120*l.* with only 5*l.* paid; which, with others, demonstrate the value attached to our home mines.—A CORNISH MINER: *Truro, Sept.* 27.

THE ANTIMONY MINES.

SIR,—I observed, in your Journal of Saturday last, a letter from one who professes himself to be a "Small Adventurer," in which he thinks proper to animadvert strongly upon some remarks respecting the mines which appear in your Notabilia, and, among others, he takes this point for the purpose, if possible, of depreciating the Antimony and Silver-Lead Mines. He admits, as a fact, that Messrs. Gray and Stevens had realised a something by the sale of a mine, and then goes on to state, that this remark is made for the purpose of puffing the Antimony and Silver-Lead Mines. Allow me to state, these mines require no puffing. I will merely briefly observe, that what has been stated by your correspondents, in the Notabilia, together with the numerous competent parties who have reported on the mines—among whom are the following: Prof. D. T. Ansted, Captain John Vivian, of Truro, Captain John Spargo, J. Buzzo, James Hosking, and others—the whole of whose reports represent this mine as one of the most promising in the county of Cornwall, without exception. I, therefore, contend that the course the *Mining Journal* has thought proper to adopt has been perfectly correct; the Editor has only given those remarks in his Notabilia which he has received from parties of high mining reputation in the county, upon whom reliance can be placed. I will ask the "Small Adventurer" to name one captain or agent of known respectability—nay, one miner—who has seen the Antimony and Silver-Lead Mines, and condemned them. The mine is at all times open for inspection, and can be viewed at all reasonable hours. I beg to state, the engine is purchased, and will at once be erected, so as to prosecute the mine with vigour. I will merely add, that the "Small Adventurer" would do far better, when he makes statements to the public, for the purpose of damaging a young mine, and one which, I trust, will prove old in years, and highly remunerative in dividends to the shareholders, that he should simply place his name and address at the foot of his letter, that we may know from whence such insinuations come, and repel them, so as to make "A Small Adventurer" look smaller still. A man who shows his colours is entitled to respect; but he who fights under false ones deserves no quarter.

Lombard-street, Oct. 5. THOS. BARTLETT.

MINE SHARE-DEALING.

SIR,—A writer in your last, who promises "a Compendium" of mining, in alluding to the roguceries of mine dealing, does not suggest a remedy. It is much to be regretted that so important a *creative* source of wealth as mining should ever have lost that confidence of the British public, to which it is entitled. It is the want of this confidence that has banished British mine share-dealing from the Stock Exchange, and substituted a prejudiced favouritism for foreign mines. Mine shares may be made, to parties who invest in several mines, as certain a source of average profit as underwriting, or any other speculation in which an average profit is sought. The writer in your last speaks of the unwillingness of Cornishmen to give proper information. As fair representation is the object and right of the public speculator, let me suggest a mode to insure it. Let the members of the Stock Exchange, and respectable mine-brokers, form a board; let that board give its authority to men of known capacity and integrity, as mine reporters; let a public room be engaged, where such reports may be filed, and a register kept of reports and sections of those mines only to which free access for inspection is permitted; let a register of reporters be kept also. Should a reporter at any time give a report of any mine in which he is interested, without declaring his interest, let his name be struck off the register. Let a book be kept in which a deceived party may write his complaint, for the inspection of the committee. Let a list be kept of mine-brokers, distinguishing those who speculate in shares on their own account, those who buy only, and those who both buy and sell. In Liverpool, amongst the cotton-brokers, there are some who buy only.

If such an association were formed, fair-play would be insured; the reports and sections lodged would be, at all times, a reference and source of information; mine investments would then be a fair risk. All mines cannot be good—results cannot be certainly predicted—but probabilities may be fairly stated, and a fair chance insured to the speculator.

When the current expenses of a mine are subscribed for as the mine goes on, and parties are allowed to withdraw their names by forfeiture of their shares, the liability of partnership is avoided; but the adoption of anonymous shares, as practised on the continent, is the best mode.—ARGENT: *Gloucester, Oct.* 5.

[From the *Plymouth Journal.*]

WHEAL FRANCO.—The rise in the standard, although slight, added to the improved state of the lower levels, will make a further profit to the adventurers in this undertaking.

PLYMOUTH WHEAL YEOLAND.—The new south lode continues to hold down in the eastern shaft. The costs of the mine for August were paid from this shaft; for Sept. a profit has been realised, and the prospects for October are still more encouraging. In the engine-shaft the ground is rather harder, and it is not intended to cut the lode above the 36 or 38 fm. level, crossing to the intersection of the lode near the 32 by a slide, which has been seen in the shaft. The lode has not been cut in the south adit.—From a western correspondent, on whose statement we can implicitly rely, we learn that a further rise in the standard of copper is confidently expected, and that tin ore is in greater demand within the last week, and at advanced prices.

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Bate's West Hartley 16 3—Charlotte 14—Chester Main 13 6—Dean's Primrose 13 3—Holywell Main 14 6—New Tanfield 13 6—Original Tanfield 12 3—Walker's Primrose 12 3—Eden Main 15 9—Lambton Primrose 15 6—Derwentwater Hartley 16 3—Morgan's Stone 25 6—Powell's Duffryn Steam 18 9—Snapethorpe 14—Wall's End Acorn Close 15 3—Bewicke and Co. 14 9—Brown's 14—Benson 14—Gosforth 14 6—Hotspur 14 3—Killingworth 14 3—Northumberland 14 3—Riddell's 14 3—Wharncliffe 14 6—Belmont 16—Bell 15 9—Hetton 16 9—Haswell 17 3—Keepier 16—Lambton 16 3—Morrison 14 9—Russell's Hetton 16 3—Shotton 15 6—Stewart's 17—Hudson's Hartlepool 15 6—Hough Hall 15 6—Kelloe 15 6—South Hartlepool 15 9—Thornley 15 9—Adelaide Tees 13 9—Denison 13—Richardson's Tees 14—Seymour Tees 15 6—South Durham 14 9—Tees 16 6.—Ships at market, 149; sold, 91.

WEDNESDAY.—Bate's West Hartley 16 6—Dean's Primrose 13 3—Holywell Main 14 6—Townley 14—Wall's End Acorn Close 15 3—Brown's 13 9—Bensham 14—Gibson 14 6—Gosforth 14 6—Percy Bensham 14 6—Eden Main 15 9—Bell 15 9—Castle Eden 15—Hetton 16 9—Haswell 17 3—Lambton 16 3—Shotton 15 9—Whitwell 14 6—South Hartlepool 15 9—Trimdon 15—Derwentwater Hartley 16 6—Nixon's Merthyr 21—Powell's Duffryn Steam 18 9 to 19—Snapethorpe 14.—Ships at market, 74; sold, 49.

FRIDAY.—Townley 14—Wall's End Gosforth 14 6—Belmont 16—Bell 15 9—Hetton 16 9—Lambton 16 6—Whitwell 15 3—South Hartlepool 15 9—Trimdon 15 6—Adelaide Tees 15 9—Seymour Tees 15 6—South Durham 14 9.—Ships at market, 32; sold, 27.

BOILER EXPLOSIONS.—TO ENGINEERS, MILL-OWNERS, AND OTHER PARTIES USING STEAM-POWER.

Mr. EDWARD WALMSLEY calls the attention of the above to a MODIFICATION of his PATENT APPARATUS for the PREVENTION of STEAM-BOILER EXPLOSIONS, which he has now fitted up at the under-mentioned places, and may BE SEEN in OPERATION at any time during working hours. It is simple, effective, inexpensive, and not liable to get out of order.

At Mr. Edward Walmsley's, Bankfield Mills, Heaton Norris, Stockport; Mr. Henry Gore's, machine-maker, &c., Lever-street, Manchester; Messrs. Thomas Grundy and Co.'s, machine makers, Preston.

THE PATENT SAFETY FUSE.

FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the SAFEST, CHEAPEST, and most EXPEDITIOUS MODE of effecting this very hazardous operation. From many testimonies to its usefulness with which the manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S. &c.:—"I am very glad to hear that my recommendations have been of any service to you; they have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this."

Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY, Camborne, Cornwall.

PRODUCE OF THE PRINCIPAL CORNISH COPPER MINES,

FOR THE QUARTER ENDED SEPT. 29, 1848.

Mines.	*Ticketings.*	*Tons.*	*Amount.*
Devon Great Consols	3	3808	£18743 7 0
Consolidated Mines	4	2966	13796 13 6
Carn Brea	3	2573	13544 8 0
Par Consols	7	2313	13178 17 6
Great United	4	3859	12943 16 0
North Roskear	2	1944	8697 8 0
South Caradon	4	1048	6543 9 6
West Caradon	3	861	5789 18 6
Wheal Seton	3	1314	5679 10 0
Fowey Consols	5	1115	5177 7 6
Wheal Friendship	4	754	4683 15 6
South Wheal Frances	3	672	4386 2 6
North Pool	2	1318	4237 6 6
Tresavean	4	1111	3952 1 0
Treviskey and Barrier	5	759	3350 13 6
South Wheal Basset	3	478	2760 9 6
Levant	2	550	2752 6 0
Perran St. George and Bolenna	2	742	2320 4 0
Treleigh	3	409	2251 4 6
Tincroft	2	645	2101 16 0
Wheal Mary Consols	3	363	1970 7 6
East Wh. Crofty, Dudnance, & Longclose	1	448	1886 6 6
Wheal Comfort	4	797	1881 10 6
Stray Park and Camborne Vean	1	518	1872 2 0
South Roskear and Wheal Chance	2	436	1854 19 6
Creegbraws	2	452	1785 6 6
West Wheal Treasury	2	385	1748 14 0
Bedford United	3	308	1724 16 6
Tywarnhayle	1	480	1700 19 0
Wheal Ellen and Music	2	226	1264 2 6
Poldice	2	293	1173 19 0
Grambler and St. Aubyn	2	274	1061 5 6
Dolcoath	1	199	959 1 6
Tincroft	1	200	904 16 6
Wheal Agar	4	232	805 13 0
Trethellan	2	308	749 6 6
Wheal Buckets	3	232	740 8 0
Condurrow	1	242	736 8 6
Andrew and Nangles	2	157	660 11 6
East Pool	1	209	637 8 0
Tremayne	3	184	624 3 0
Phœnix	3	75	621 0 0
Alfred Consols	2	206	595 1 0
Charlestown United	1	75	594 7 6
Marke Valley	1	182	522 7 0
South Tolgus	2	133	518 13 0
East Seton	2	92	416 6 0
Wheal Henry	2	89	315 18 6
Wheal Williams	3	72	280 14 6
Wellington	1	40	278 4 0
Holmbush	1	54	276 15 0
South Wheal Fortune	1	55	275 9 6
Gwinear Consols	2	37	263 0 0
Wheal Clifford	2	92	251 7 6
Wheal Jewel	2	78	250 15 0
West Wheal Jewel	1	73	243 7 0
Wheal Malden	2	68	229 6 6
Wheal Pink	1	57	212 6 6
West Trethellan	2	78	207 12 6
Botallack	1	40	166 0 0
Wheal Harriet	2	66	156 18 0
Wheal Busy	1	59	144 15 0
Wheal Vyvyan	1	26	136 10 0
Wheal Prudence	1	57	126 13 6
Wheal Sisters	1	40	125 0 0
Ting-Tang Consols	2	43	116 17 0
Wheal Prosper	1	56	112 0 0
Wheal Jane	1	35	106 15 0
Wheal Tryphena	1	10	93 0 0
Budnick Consols	1	13	92 12 6
Wheal Ayr	1	22	86 7 0
Wheal Virgin	2	26	86 6 0
East Downs	2	19	79 3 0
Ashburton United	1	12	71 14 0
East Crowndale	1	22	66 11 0
Polgooth	1	20	61 0 0
Lanivet Consols	1	33	59 4 6
Wheal Venture	1	8	53 0 0
Wheal Brewer	1	28	49 14 0
North Godolphin	1	21	40 8 6
Copper Bottom	1	5	31 2 6
Wheal Pleasant	1	11	26 8 0
Wheal Edward	1	3	14 18 6
Wheal Ruby	1	11	14 17 0
Total		*Tons* 39,826	£175,509 16 6

EXPERIMENT BY THE ELECTRIC TELEGRAPH COMPANY.—An experiment was made at Manchester, on Wednesday, by Mr. Cox, superintendent of the Electric Telegraph Company, and assistants, as to the practicability of passing electric currents along covered wires under water. The wire was that ordinarily used, of copper, wrapped with cotton, and then passed through the shellac, and coated outside with India-rubber (cold naptha being used to cement the latter). One end of the wire was in communication with the Telegraph Company's instruments at the office near the Exchange, and the other end with an instrument at Mr. Gaskell's mill, on the Salford side of the river, at about 500 yards distance. A portion of the wire, including a coil of about half a mile in length, was submerged in the River Irwell. Communications were passed along the wire with the ordinary facility, and the experiment appears, so far, to have answered.

FOOT SUSPENSION-BRIDGE, SUN TAVERN FIELDS, SHADWELL.—A foot suspension-bridge has just been erected, under the direction of Mr. Wm. Dredge, C.E., across the Ropery-grounds, in the Sun Tavern Fields, parish of Shadwell, to form a communication between the Commercial-road and the London Docks. The bridge is built of iron, with the exception of the roadway, which is planked with 2½ in. yellow battens. The clear span of the bridge is 91 ft., the width of the roadway 7 ft. 6 in. Each chain, as it rests upon the tower of support, is composed of eight ⅝ in. round bars of iron, and four bars, each ¾ in. in diameter; this gives an aggregate section at each end of 6·52 square inches of iron in the chains, the breaking strain of which is 195 tons, being equivalent to 182 tons placed upon the platform. The weight, however, which the bridge will bear in safety is only one-third of this, or 44 tons. The holdfasts to the retaining chains are held in their places by being securely imbedded, each in about 10 tons of concrete. The platform, when extremely loaded, will hold about 150 persons. Estimating each person at 168 lbs., the total will be 11·75 tons, to which, adding 10 tons as the weight of the bridge, we get 21·75 tons as the extreme load which the chains will ever have to resist; but as they are capable, without injury, of bearing 44 tons, there is a surplus power of 21·25 tons over and above the extreme load.—*Mechanics' Magazine.*

EXTRAORDINARY BLAST.—On Saturday last, some blasting took place at the Catte Down Quarries, under the following circumstances:—The hole was bored 20 feet, with a 3-inch bit, and was blasted five times. The first four blasts consumed 200 lbs. of powder, and the fifth 320 lbs.; total quantity of powder used being 520 lbs. The stone raised in the quarry was estimated by the gaugers to be about 5000 tons, in blocks chiefly from half-ton to 100 tons.—*Plin. Jour.*

NEW PATENTS.

T. Metcalf, High-street, Camden Town, Middlesex, gentleman, for improvements in the construction of chairs, sofas, and other articles of furniture for sitting or reclining on.

E. J. Massey, Liverpool, for improvements in apparatus for measuring the speed of vessels and streams, and for ascertaining the depths of water.

J. S. Bailey, Bradford, York, spinner, for certain improvements in preparing, combing, and drawing wool, alpaca, mohair, and other fibrous materials.

DESIGNS FOR ARTICLES OF UTILITY REGISTERED.

W. Rowan, Belfast, engineer, fluctuating slider.

G. Chambers and Co., Studley, holder for crochets or tambour needle, a piercer, or other similar articles.

T. Rontree and A. Brown, Liverpool, improvements in stand and other pipes used for the conveyance of fluids.

R. A. Lambert, Bedford-street, Covent-garden, improvements in the shape or configuration of mechanical or artificial leeches, and the lancets used therewith.

G. F. Morrell, Fleet-street, abutments applicable to all arches and breastsummers.

A. A. de Reginald Hely, Manchester-buildings, Westminster, portable gaseous liquid fountain.—*Mechanics' Magazine.*

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning Eleven o'clock.

Bank Stock, 9 per Cent., —
3 per Cent. Reduced Ann., —
3 per Cent. Consols Ann., 86¼
3½ per Cent. Ann., —
Long Annuities, —
India Stock, 10½ per Cent., 235
3 per Cent. Consols for Acct, 86¼ ⅜
Exchequer Bills, 1000*l.* 2d. 30 28 31 pm.

Belgian, 4½ per Cent., 71½
Dutch, 2½ per Cent., 45 ⅛
Brazilian, 5 per Cent., 72½
Chilian, 6 per Cent., 83
Mexican 5 per Cent., 18½
Russian, 5 per Cent., 99½
Spanish, 5 per Cent, 11⅝
Ditto 3 per Cent., 23½

MINES.—We are pleased to find that a considerable reaction has taken place in the mining share market during the week—an active demand having been made for shares in several mines, especially the dividend and leading mines of Cornwall. Whether this arises from the positive improvements in the respective mines—the anticipated advance in the standard, or the demand for fine copper, we will not venture to affirm—but we may hope that the combination of causes adverted to, will have the effect of producing the long expected and desired change.

A slight increase has been made on the past two or three ticketings, but we require the advance in the same proportion with the decline.

We have had a rise of 2*l.* per ton on tin this week; and lead has maintained its price very well through the past 12 months. With these favourable changes in the metal market, we may fairly calculate on a permanent improvement in the share market.

In Devon Great Consols several shares have changed hands at an advance on last week's quotation, and negociations are still going on for others. A share was sold last week under former prices, which may have attracted the many buyers who have risen during the week.

Several shares in Treviskey and Barrier have been done, and buyers still in the market.

East Wheal Rose shares have also changed hands, and more may, at buyers' prices.

An active inquiry has been made for Wheal Mary Ann shares, and several have been done at an advance on previous rates.

Wheal Seton, South Basset, North Pool, and South Roskear, have also been in request.

Shares in the following mines have been sold during the week—viz.: Devon Great Consols, East Wheal Rose, Treviskey and Barrier, Trelawny, Wheal Mary Ann, East Tamar, Herodsfoot, Trehane, Camborne Consols, Tregordan, Treleigh, Mendip Hills, Keswick, Tamar, Trethellan, Kirkcudbright, Stray Park, &c.

Creeg Braws adventurers held their bi-monthly account for June and July on the 28th Sept., when it appeared that the expenditure exceeded the returns by 50*l.* The agent's report states the mine to be in a progressively improving position.

South Wheal Basset adventurers met on Tuesday last, to audit their accounts for the months of July and August, when a dividend of 5*l.* per 128th share was declared, reserving a balance of 133*l.* 19s. 7d. The profits on the two months' working appears to be 837*l.* 8s. 4d., and the copper ores sold amounted to 250*l.* 3s. 9d. The mine is represented to be in a very flourishing and improved position.

The annual meeting of the Treleigh Consolidated Mining Company was held on Tuesday last; the statement of accounts showed a balance in hand of 680*l.* 10s., after payment of 2798*l.* 15s. in dividends, and carrying 275*l.* to the reserved fund. The agent's report of the mine, represented a considerable improvement having taken place, particularly in the 90 fm. level east, where they have a course of ore worth 40*l.* per fm.

A special meeting of adventurers in Lamberooe Wheal Maria was held, on the 5th inst., when 180 shares were declared forfeited. From the balance-sheet, it will be seen, there will be sufficient funds to carry on the works until Christmas, by which period the mine may be expected to be fully proved.

In a leading article of this day, some observations appear relative to the "North British Australasian Company," whose *mineral* property consists of some copper lodes, of extraordinary richness, discovered in Kaw-aw, an island off the coast of New Zealand, the entirety of which belongs to this company. Exclusive of this, a proportion of the valuable copper sett of Bon-Accord (immediately contiguous to the celebrated Burra Burra Mine, in Austarlia, belongs to the North British Australasian proprietors. The remarks made in the article alluded to, are in consequence of the numerous complaints and inquiries that are continually coming before us, by shareholders residing at a distance from the seat of home direction (Aberdeen); and, therefore, we direct the attention of the proprietary to the facts stated, trusting that some radical change may be made in the administration of the affairs of the company, so that all shareholders may have information afforded them, as well as the satisfaction that their property is being conducted in a manner conducive to their interest.

By the East Indian mail, received on Tuesday last, we are advised of the improved position of the metal market; the advises are to the 31st of August. The *Bombay Monthly Times* observes—"The market for these (metals) had been dull for some time; but we have to report a gradual improvement, which we do not expect will be interrupted for some time. For copper a brisk inquiry has sprung up, and operations have taken place to a considerable extent, at higher prices by 2 rupees, than the former rates for sheathing. Spelter has also shown much activity, and, fresh arrivals having come in, extensive business had been done, at a slight improvement in value. Importers are now looking for an advance. In iron we have not much to report; business has been confined to sheet."

In foreign mines but little business has been done, if we except Australians. Some United Mexicans, Bolanos, and Altens, have changed hands, and inquiries have been made for Copiapos and Imperial Brazilians.

The following arrivals of specie have taken place since our last—By the Peninsular and Oriental Steam Navigation Company's ship, *Ripon*, which arrived at Southampton, on Sunday last, 166 packages of specie, value 100,000*l.* The Royal Mail Steam Packet Company's ship, *Medway*, arrived at Southampton, on Thursday, with the West India Mails, and on freight, 879,438; on merchants' account, gold coin and gold dust, 68,302*l.* value; silver bars, value 76,373*l.*; British silver, value 1056*l.* sterling; and plata pina, value 16,234*l.*—total value, 178,165*l.* The Peninsular and Oriental Steam Company's ship, *Madrid*, arrived at Southampton, on Thursday, having on freight 68 packages of specie, 1 box of diamonds, and 1 box of silver plate. The Ocean Steam Navigation Company's ship, *Washington*, arrived at Southampton, also, on Thursday, having 850,000 for Havre.

HULL, THURSDAY.—The share market, after a rather severe fall, has slightly rallied, and a few shillings per share might have been made by buying the light stock of the North British at the lowest point—say, thirds, 90s., now 97s. Nothing has transpired with regard to the lease of that line with the Newcastle Company. A memorial to the directors, to increase the return to the holders of Carlisle scrip, and to define the time of its payment, is in course of signature. In local stock little doing.

RAILWAY TRAFFIC RETURNS.

Name of Railway.	Lgth. Rway.	Present actual cost.	Price per share	Last Div.	*Traffic Returns.* 1848	1847
Belfast and Ballymena	39	—	—	—	£396	—
Birkenhead, Lancashire, & Chesh.	19	997,284	37	5*p. c.**	805	77
Caledonian	141	3,993,732	19⅞	—	5013	—
Chester and Holyhead	84	3,014,062	20⅛	—	1930	—
Dublin and Drogheda	35½	774,875	28	—	728	893
Dublin and Kingstown	7¾	395,915	—	6	1003	1157
Dundee, Perth, & Aberdeen Junc.	47¼	544,554	25	8	951	873
East Anglian (Lynn to Ely)	67½	1,167,104	4⅞	—	685	—
East Lancashire	38½	1,733,915	15	5	1561	1011
Eastern Counties and Norfolk	295	10,364,505	12⅛	4	15674	14495
Eastern Union	50½	1,522,232	20	—	1416	1227
Edinburgh and Glasgow	57½	2,556,889	38	6	4388	4126
Edinburgh and Northern	78	1,722,213	15½	4*	2035	—
Glasgow, Paisley, and Ayr	102½	2,286,353	60	—	2712	2704
Glasgow, Paisley, & Greenock	22½	848,328	14⅝	—	1097	1265
Gt. Southern & Western, Ireland	131	2,844,897	21½	4*	3194	2120
Great Western	290	11,311,069	77½	7	20915	21252
Kendal and Windermere	10½	174,600	23	—	215	178
Lancaster and Carlisle	70	1,476,102	44⅛	4	2285	1746
Lancashire and Yorkshire	172½	8,242,628	86	6	12269	11333
London and North Western	435	22,835,120	108	7	45457	46712
London and Blackwall	4	1,299,675	4⅜	1-12	903	1038
London, Brighton, & South Coast	162½	6,284,812	26⅛	2⅜	10905	10661
London and South-Western	215	7,139,733	39	6	10652	9158
Londonderry and Enniskillen	14½	154,643	16	—	127	104
Manchester, Sheffield, & Lincolnsh.	62½	4,651,093	47	5	3085	2585
Maryport and Carlisle	28	443,974	40	—	—	730
Midland Company	423½	13,254,006	82	6	24840	24443
Midland Great Western (Irish)	36¼	725,332	10½	4*	1061	845
North British	99	3,163,450	16⅜	5	2824	2780
Scottish Central	45	1,245,496	23	—	1223	—
Shrewsbury and Chester	33	780,272	11⅛	5	879	611
South Devon	50½	1,789,351	13	—	1817	1145
South-Eastern	165½	7,389,322	23	6⅝	10675	11783
Taff Vale	38	820,056	125	6	1971	1750
Ulster	36	684,684	45⅝	—	808	876
Whitehaven Junction	12	150,879	9⅞	3	192	232
York, Newcastle, & Berwick	269	5,038,258	24⅛	8	13157	13023
York and North Midland	235	4,179,309	49	8	9046	10080

* Interest.—Total for last week, £224,968, being an increase of £25,196 over last year.

PRICES OF MINING SHARES.

BRITISH MINES.

Shares.	Company.	Paid.	Price.
1000	Abergwessin	7 ..	—
512	Albert Consols	1 ..	2½
1024	Alfred Consols	4½ ..	5
235	Andrew and Nangilles	28½ ..	5
1000	Antimony and Silver-Lead Mining & Smelting	5 ..	6½
1024	Ashburton United Mines	8½ ..	10
1624	Balleswidden	9 ..	18
128	Balnoon Consols	25 ..	25
10000	Banwen Iron Co.	6 ..	6½
1000	Barristown	4½ ..	1
4000	Bedford	2⅜ ..	2
1244	Birch Tor Tin Mine	9½ ..	1½
8000	Blaenavon	50 ..	17½
100	Botallack	175 ..	60
120	Brewer	5 ..	7
10000	British Iron, New, regis.	10 ..	13
—	Ditto ditto, scrip	10 ..	10
128	Budnick Consols	52½ ..	35
128	Callestock	17 ..	10
1000	Callington	19 ..	15
1000	Camborne Consols	5 ..	17
20000	Cameron's Steam Coal	6 ..	1
256	Caradon Copper Mine	9½ ..	2
255	Caradon Mines	22½ ..	10
256	Caradon United	24 ..	5
256	Caradon Wh. Hooper	21 ..	8
1000	Carn Brea	15 ..	95
3000	Carthew Consols	1½ ..	3
2048	Cascade	1 ..	—
112	Charlestown	220 ..	60
512	Coatlithe Hill	⅛ ..	1
500	Comblawn	5½ ..	6
128	Comfort	45 ..	37
256	Condurrow	20 ..	40
2560	Cook's Kitchen	14 ..	2
1000	Coombe Valley Quarry	3½ ..	4½
6800	Cornish Mining Co.	2 ..	2⅜
20000	Cornwall New Mining	1 ..	1
1000	Copper Bottom	1½ ..	6½
1024	Cosheen	4½ ..	20
225	Craddock Moor	16½ ..	5
128	Creeg Braws	120 ..	100
500	Culvert Mine	12½ ..	10
1000	Cwm Erfin	3½ ..	1½
300	D. Prior & Buckfastleigh	14 ..	25
7100	Derwent	8½ ..	5
845	Devon & Courtenay Con.	7⅝ ..	⅜
1024	Devon Great Consols	1 ..	200
1000	Dinorode	2 ..	5
186	Dolcoath	30 ..	15
2560	Drake Walls	4 ..	4
10000	Durham County Coal	45 ..	9
3000	Dyfngwm	10 ..	12½
512	East Alvenney	5½ ..	12½
112	East Caradon	47 ..	47
2048	East Crowndale	5½ ..	2½
512	East Combe Silver-Lead	6½ ..	6½
128	East Pool	5 ..	20
100	East Relistian	22 ..	40
9000	East Tamar Consols	⅝ ..	⅜
—	East Wheal Albert	1 ..	3
94	East Wheal Crofty	125 ..	250
1024	East Wheal Fortune	2 ..	3
1024	East Wheal Friendship	3 ..	3½
128	East Wheal Rose	50 ..	800
—	East of Scotland Iron Co.	5 ..	1½
123	East Wheal Seton	14 ..	10
256	Exmoor Wh. Eliza	5 ..	8–10
512	Fowey Consols	40 ..	45
1024	Freidd Llwydd Mines	1½ ..	3½
6400	Gadair	2 ..	2
40000	Galvanised Iron Co.	10 ..	1½
4000	Gen. Mining Co. for Irel.	1½ ..	1½
2048	Goldscope Mine	2 ..	2
256	Gonamena	34 ..	5
128	Goonvrea	4 ..	2
100	Great Consols	1000 ..	400
1600	Great Michell Consols	1½ ..	⅛
256	Great Resugga Moor	11 ..	6
512	Gt. Wh. Rough Tor Con.	18½ ..	16
1200	Growa Slate Company	5 ..	5
256	Gwinear Consols	7 ..	3
6000	Heigneton Down, Con.	⅛ ..	2½
256	Herodsfoot	18 ..	23
10000	Hibernian	12½ ..	1⅝
239	Hobb's Hill	6 ..	1½
1000	Holmbush	19 ..	1½
827	Kirkcudbrightshire	5½ ..	2
2048	Lamberooe Wh. Maria	11 ..	1
128	Lelant Consols	90 ..	60
160	Levant	— ..	120
1000	Lewis	15 ..	5½
1000	Llwyn Malees	5 ..	—
3600	Llynvi Iron	50 ..	50
256	Lostwithiel Consols	15 ..	15
6000	Marke Valley	10 ..	2
5000	Mendip Hills	2½ ..	1
5000	Merionethshire Slate Co.	1½ ..	2
128	Metha	34 ..	133
20000	Mining Co. of Ireland	7 ..	4⅛–¼–⅜
256	New East Crowndale	3½ ..	2½
128	North Fowey Consols	37 ..	10
100	North Pool	45 ..	400
140	North Roskear	5½ ..	120
262	North Wh. Leisure	1½ ..	2
15000	Northern Coal Co.	23 ..	2
128	Par Consols	— ..	1009
4000	Pennant	2 ..	1
100	Penrhiw	30 ..	65
1024	Penzance Consols	16s 3d ..	1
1280	Perran St. George Un.	13 ..	20
128	Perran Wh. Virgin	9½ ..	10
512	Plymouth Wh. Yeoland	6½ ..	15
256	Polsaith Consols	4½ ..	4½
2500	Rhoswiddol & Bacheidon	10 ..	10
10000	Rhymney Iron	50 ..	13
10000	Ditto New	7 ..	6⅝
1000	Rosewall Hill	1 ..	5
256	Rosewarva Mines	— ..	12

BRITISH MINES—*continued.*

Shares.	Company.	Paid.	Price
128	South Caradon	10 ..	350
1100	South Dolcoath	4 ..	4
256	Sth. Friendsh. Wh. Ann	30 ..	4
256	South Molton	5 ..	8–10
256	South Tolgus	10 .	52½
256	South Trelawny	20 ..	8
128	South Wheal Basset	110 ..	120
256	South Wh. Betsey	2½ ..	12½
124	South Wh. Frances	160 ..	215
1000	South Wh. Maria	2½ ..	1½
10000	Southern & Western, Irish	2 ..	4
280	Spearne Moor	30 ..	40
256	St. Austell Consols	9 ..	—
94	St. Ives Consols	— ..	320
128	St. Michael Penkivel	5 ..	10½
999	St. Minver Consols	1 ..	6
1000	Stray Park	43 .	15
9600	Tamar Consols	3 ..	5
1024	Tavy Consols	4 ..	8
6000	Tincroft	7 ..	4
1000	Tin Vale	2½ ..	3½
128	Tokenbury	152½ ..	10
256	Tolpetherwin	3½ ..	5
256	Tregordan	1 ..	5
256	Trehane	2½ ..	26½
5000	Treleigh Consols	6 ..	2
2000	Trenance	3 ..	18
96	Tresavean	10 ..	210
120	Trethellan	5 .	18
120	Treviskey and Barrier	130 ..	85
288	Trevean	1½ ..	5
100	United Mines	300 ..	350
256	Wellington Mines	15 ..	10
128	West Basset	45 ..	7
256	West Caradon	20 ..	65
128	West Cargoll	2 .	12
512	West Fowey Consols	40 ..	15
256	West Providence	9 ..	12
200	West Seton	40 .	200
—	West of Scotland Iron Co.	240 ..	90
120	West Trethellan	5 ..	30
256	West United Hills	— ..	4½
512	West Wheal Frances	1⅞ .	2
256	West Wh. Friendship	9 ..	8
3725	West Wheal Jewel	11 ..	1½
256	West Wheal Tolgus	21½ ..	5
256	West Wheal Treasury	19 ..	8
5200	Wicklow Copper	5 ..	8½
184	Wheal Adams	51 ..	10
1000	Wheal Agar	— ..	8
256	Wheal Albert	10 ..	1
256	Wheal Allen	2 ..	5
300	Wheal Anderton	23 ..	15
128	Wheal Ann	— ..	50½
512	Wheal Anna Maria	6½ .	8
1024	Wheal Ash	4⅜ ..	8
120	Wheal Bal	5½ ..	20
2560	Wheal Barbara	1⅛ ..	—
256	Wheal Blencowe	21 ..	5
256	Wheal Bucketts	20 ..	5
256	Wheal Calstock	5 ..	10
136	Wheal Clifford	190 ..	50
1024	Wheal Coad	⅛ ..	12½
268	Wheal Courtenay	12½ ..	15
256	Wheal Fortescue	6⅛ ..	3
388	Wheal Franco	27 ..	18
128	Wheal Harriet	45 ..	50
256	Wheal Jane	21 ..	15
1024	Wheal Lawrence	2⅝ ..	6
256	Wheal Louisa	8¼ .	8
112	Wheal Margaret	79 ..	250
512	Wheal Mary Ann	5 ..	14
237	Wheal Mary Consols	42½ ..	5
—	Wheal Penhale	— ..	12
210	Wheal Prospect	4 ..	7
120	Wheal Reeth	41 ..	150
128	Wheal Rose	50 ..	5
99	Wheal Seton	214 ..	650
194	Wheal Sisters	32½ ..	12
512	Wheal Sophia	3⅛ ..	5
128	Wheal Spearne	10 ..	75
128	Wheal St. Ann	30 ..	35
550	Wheal Trescoll	3 ..	10
260	Wheal Trelawny	7⅛ ..	55
236	Wh. Tremaine (St. Ervan)	7⅛ ..	4
1024	Wheal Tremayne	35 ..	1½
92	Wheal Tryphena	140 ..	265
242	Wheal Venland	29½ ..	30
256	Wheal Vlow (Perranz.)	⅜ ..	⅜
184	Wheal Vyvyan	— ..	60
250	Wheal Williams	28⅜ ..	8
1024	Whiddon Mines	4⅜ ..	4⅜

FOREIGN MINES.

Shares.	Company.	Paid.	Price.
5000	Alten Mining Company	14⅛ ..	2½
15000	Asturian Mining Co.	13 ..	2½
20000	Australian	2½ ..	4–3–2–1–¼
10000	Anglo-Mexican Co.	100 ..	¼
12374	Ditto Subscription	25 ..	2¼
6000	Barossa Range	¼ ..	1
3000	Bolanos	150 ..	2½–1
2000	Ditto Scrip	15 ..	3
12000	Brazilian Imperial	23 .	4½
10000	Cobre Copper Co.	40 ..	13½
10000	Copiapo Mining Co.	14 ..	2
10000	General Mining Ass'n.	20 .	11
5000	Kinzigthal Mining Ass.	2 ..	3
20051	Mexican Company	59 ..	—
2000	Mexican & South Amer.	8 ..	⅛
5000	National Brazilian	30 ..	3½–5½
100000	N. Brit. Australasian	1 ..	⅛
29320	{Rl. del Monte, regis. / Ditto unregistered}	28½ ..	⅜
	Ditto Red Debentures	— ..	4
	Ditto Black ditto	— ..	1–1½
	Ditto Loan Notes	150 ..	12
7000	Royal Santiago	10 ..	4
11000	St. John del Rey	15 ..	7
13174	United Mexican	Av. 28½ ..	2½

LATEST CURRENT PRICES OF METALS.

LONDON, OCTOBER 6, 1848.

	£	s.	£	s.	d.
IRON—Bar *a*. Wales	*ton*	5	10	5	12	6
,, London	..	0	0	6	15	0
Nail rods ,,	....	0	0	7	10	0
Hoop (Staf.), ,,	....	0	0	9	0	0
Sheet ,, ,,	....	0	0	9	10	0
Bars, Staffordshire		0	0	6	10	0
Welsh cold-blast foundry pig	..	3	15	4	5	0
Scotch pig *b*, Clyde		2	4	2	5	0
Rails, average	....	5	10	5	15	0
Chairs	....	0	0	4	0	0
Russian, CCND	*c*..	0	0	17	0	0
,, PSI	....	0	0	—	—	
,, Gourieff		0	0	—	—	
,, Archangel		0	0	13	0	0
Swedish Steel, fagt.	*d*	0	0	15	0	0
,, ,, kegs	*e*	13	10	14	0	0
COPPER—Tile	*f*	0	0	78	10	0
Tough cake	....	0	0	79	10	0
Best selected	....	0	0	82	10	0
Ordin. sheets,	*lb*...	0	0	0	0	9

	£	s.	£	s.	d.
COPPER—Ord. bottoms	..	0	0	0	0	10
YELLOW METAL SHEATHING		0	0	0	0	7½
TIN—Com. blocks *g*	*cwt.*	0	0	3	15	0
,, bars	....	0	0	3	16	6
Refined	....	0	0	3	19	0
Straits *h*	....	3	12	6	3	14	0
Banca	....	0	0	3	15	0
ditto for arrival	....	0	0	—	—	
TIN-PLATES—Ch., IC *i*, *box*		1	9	1	10	0
,, IX	....	0	0	1	15	0
Coke, IC	....	1	6	1	7	0
,, IX	....	0	0	1	11	6
LEAD—Sheet *k*	*ton*	17	0	17	5	0
Pig, English	....	16	0	16	5	0
,, Spanish, in bd.		15	0	16	0	0
Red	....	0	0	18	5	0
Dry White	....	0	0	22	15	0
Shot (Patent)	....	0	0	19	5	0
SPELTER—(Cake) *l* on spot		14	0	14	5	0
ZINC—(Sheet) *m* export.		20	0	20	0	0
QUICKSILVER *n*	*lb.*	0	0	0	3	6

MONTHLY REPORT.—SPELTER.—The business done in this article during last month has been small, and the price has declined to about 14*l.* per ton, at which, however, there is little enquiry; but, the near approach of winter, and therewith the discontinuance of further supplies from the Continent, renders holders extremely firm, and not disposed to any further reduction in price. The stock in London has scarcely varied from last month (the demand for export and consumption being met by the imports), and was on the 1st instant 2880 tons.

IRON.—The enquiry for Welsh bars and rails continue extremely limited, but prices are unaltered. In Staffordshire, the makers are full of orders, and the question of a rise in price was the subject of discussion at the recent quarterly meetings; the result was a determination to abide by present rates, but a slight advance thereon is needful, to induce some makers to take orders. In the Scotch pig-iron market there has not been much doing during the latter part of the month; the price is a shade lower, say 44s. for 3-5 No. 1, and 2-5 No. 3, and 45s. for all No. 1, nett cash, shipped free on board at Glasgow; makers are, however, firm at rather higher rates, and not anxious sellers, while little progress has been made towards the accumulation of stock at Glasgow, which has not been so small for several years. Swedish iron is scarce, and the demand, though small, exceeds supplies, and holders are firm, at full prices.

SWEDISH STEEL is firmly held by importers at 14*l.* per ton, in the prospect of winter, and therewith the discontinuance of supplies from Sweden, where also the production has been much lessened; but, in second-hands, parcels are to be had at lower rates.

COPPER is in moderate demand—sales of sheathing and tile have been made for account of an insolvent concern at 3*l.* to 4*l.* per ton under quotations, which are the rates agreed on by the copper houses. To India, China, &c., the shipments have been 150 tons.

TIN.—English was reduced on the 7th ult. 2s. per cwt.; but has within the last few days been advanced to old rates. At public sale, on the 3d inst., 300 slabs banca were bought in at 75s. per cwt.; straits is held at 72s. 6d. to 74s. per cwt.

TIN-PLATES are in request, and higher rates are demanded.

LEAD.—For export the demand is limited, but for home consumption there is a fair business doing.

GLASGOW PIG-IRON TRADE, OCT. 5.—In the article of pig-iron, there has been little inquiry this week. The price has declined, and the tendency seems to a further declension. The price may be quoted as at 44s. for mixed Nos.—cash.

EXPORTATION OF THE PRECIOUS METALS.—The following are the official returns of the exports of gold and silver from the port of London for the last week:—Silver coin to Port Adelaide, 410 ounces; ditto to Rotterdam, 16,000; ditto to Belgium, 1000; ditto to Calais, 1000—Gold coin to Calais, 37; ditto to Belgium, 597.

Proceedings of Public Companies.

MEETINGS DURING THE ENSUING WEEK.

MONDAY.....Eastern Union Railway Company—Radley's Hotel, Blackfriars, at Two.
TUESDAY.....West United Hills Mining Company—Queen's Arms, Cheapside, Twelve.
Rhoswiddol and Bacheiddon Lead Mines Co.—offices, at ½ past Eleven.
Demerara Railway Company—London Tavern, at One.
WEDNESDAY...Wheal Mary Mining Company—at the mine.
THURSDAY....Imperial Gas-Light and Coke Company—offices, at Twelve.
Royal Mail Steam-Packet Company—London Tavern, at One.
FRIDAY.....Universal Salvage Company—London Tavern, at Four.

SILVER-LEAD ORE.

Sold at Helston, Sept. 22.

Mine.	*Tons.*	*Price per Ton.*
Wheal Rose	50	£17 7 0
ditto	10	11 9 6

Total tons....60.—Amount of money....£982 5s.

[The price of the first parcel was erroneously printed 7*l.* 7s. per ton, in last Journal.]

LEAD ORES.

Sold on the Mine.

Mines.	*Tons.*	*Price.*	*Purchasers.*
East Wheal Rose	99	£11 3 6	T. Somers.
ditto	82	11 7 6	Walker, Palker, & Co.
ditto	66	11 5 6	Sims and ditto.
Total tons	238.		
Sold at Aberystwith.			
East Logylas	65	£8 18 0	Walker, Parker, & Co.
ditto	65	8 18 0	Newton, Keates, & Co.
Total tons	130.		
Sold at Liskeard.			
Trehane	64	£18 1 6	Walker, Parker, & Co.
Sold at Bagilt.			
Peel	96	£9 16 0	Walker, Parker, & Co.
Sold in London.			
Callington	82	£16 16 6	T. Somers.
Wheal Adams	30	10 4 6	Sims and Co.

COPPER ORES.

Sampled Sept. 28, and Sold at White's Hotel, Pool, Oct. 5, 1848.

Mines.	*Tons.*	*Price*	*Mines.*	*Tons.*	*Price.*
Wh. Seton	123	£4 1 6	Wh. Basset	49	£3 7 0
ditto	117	5 11 0	ditto	2	10 10 0
ditto	111	5 13 0	Tincroft	59	1 5 0
ditto	110	4 19 6	ditto	57	3 18 0
ditto	100	4 6 6	ditto	50	2 18 0
ditto	74	5 4 6	ditto	49	7 2 6
ditto	66	5 10 6	ditto	40	3 1 6
North Pool	122	5 1 6	ditto	39	4 1 6
ditto	121	3 13 6	Condurrow	64	3 14 0
ditto	72	4 7 6	ditto	57	3 5 0
ditto	69	3 11 6	ditto	50	2 16 0
ditto	68	1 19 0	ditto	40	7 10 6
ditto	56	3 9 0	ditto	29	1 13 6
ditto	54	4 18 6	Fowey Consols	84	5 10 0
Camborne Vean	71	4 18 6	ditto	76	4 5 6
ditto	70	4 8 6	ditto	75	6 0 6
ditto	66	3 14 0	East Pool	94	4 7 6
ditto	64	5 0 6	ditto	43	3 12 0
ditto	63	3 16 0	ditto	42	2 15 6
ditto	56	3 3 0	ditto	40	0 7 6
ditto	50	7 16 6	South Wh. Frances	58	7 10 0
ditto	42	3 13 6	ditto	52	13 17 0
ditto	35	1 15 0	ditto	48	12 5 0
East Wh. Crofty	102	4 8 6	ditto	47	12 6 0
ditto	88	5 4 0	Dolcoath	61	4 9 6
ditto	42	1 19 0	ditto	55	2 18 0
ditto	41	3 18 0	ditto	48	7 5 6
Dudnance	69	6 11 6	Wh. Bucketts	47	3 9 6
Longclose	54	4 7 0	ditto	36	3 11 0
Wh. Basset	80	7 8 6	Wh. Mary	60	5 7 0
ditto	77	4 10 0	South Wh. Fortune	23	6 11 0
ditto	57	5 2 6	ditto	13	9 1 6
ditto	51	3 5 6			

TOTAL PRODUCE.

Wh. Seton	701	£3508 15 6	Condurrow	240	£911 12 6
North Pool	562	2217 5 0	Fowey Consols	335	1238 15 6
Camborne Vean	517	2217 17 6	East Pool	219	797 12 0
East Wh. Crofty, Dudnance, Longclose	396	1839 6 6	South Wh. Frances	205	2321 6 0
			Dolcoath	164	781 13 6
			Wh. Bucketts	83	286 8 0
Wh. Basset	316	1584 16 0	Wh. Mary	60	321 0 0
Tincroft	294	1072 2 0	South Wh. Fortune	36	268 12 6

Average Standard.....£ 92 17 0 | Average Produce.....8¾
Average Price per ton.....£4 15 6
Quantity of Ore.....4027 tons. | Quantity of Fine Copper, 326 tons 19 cwts.
Amount of Money.....£19,297 2 6
LAST SALE.—Average Standard.....£ 91 19 0.—Average Produce.....7¾

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
Mines Royal	318	£1810 6 3
Vivian and Sons	809	4033 15 0
Free

NOTICES TO CORRESPONDENTS.

We regret to learn that a gentleman connected with mining affairs is under the imputation of having endeavoured, by false representations, to impose on a lady, and induce her to purchase some shares in a Redruth mine. The friends of the lady are determined, as a caution to others, to make the whole matter public—the conduct of the agent being deemed of the most reprehensible nature.

"A Looker-On" (Devonport) must authenticate his statement before we can allude to it.

The letter of "E. B.," on the Blaenavon Iron Company, shall appear in our next.

Received—"A. S.," on Dialling—"A Mining Adventurer," on the Smelting Company—"R. W. S.," on Imports of Metals in India.

THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, OCTOBER 7, 1848.

We feel called upon to refer again to the management of the NORTH BRITISH AUSTRALASIAN COMPANY. We continue to hear numerous complaints of the obstinate manner in which the directors withhold all information of the position or prospects of the undertaking. We were in hopes that the remarks, which we made somewhat prominently in this Journal, on the 29th of July last, would have had some effect. But we were mistaken. We have been given to understand, that the resolution agreed to at the late meetings in Aberdeen was to the effect of authorising the directors to raise a considerable loan. Now, we ask, was it fair, to say the least of it, to call meetings of only Aberdeen shareholders for so important a purpose? Are not the English shareholders as much interested? And have they not as much right to be consulted? And yet they only accidentally hear of what took place at the meetings of the company, and that in an indirect way, about three months after they have been held. According to all the rules of fairness and justice, they had a right to receive notice of the resolution to be proposed, and of the result; but not even the Aberdeen papers contained one or the other.

We have no doubt that the "cannie Scotchmen" may be good "men of business," and may efficiently manage the agricultural concerns of the company; but we should imagine them to have very little knowledge of mining affairs. They would do well, therefore, to take into their counsels some one, who, from his position and experience, would give them sound advice on this point.

From facts which we recorded in these pages about 18 months ago, we should think that a dividend ought to be forthcoming ere long. About two years ago, information was received from the colony that the miners were raising at the rate of 10 to 12 tons per day. It was also said that the appearance of the ore was splendid, the results of the numerous assays being an average of from 20 to 25 per cent.—some parcels were as high as 50 per cent. At that time about 500 tons had already been received, realising the average price of 11*l.* 12s. 5d., although not selected by any experienced miner—the mining captain and men from Cornwall not having arrived at the time of its shipment. The expense of working and freight did not cost more, upon the quantity alluded to, than 6*l.* per ton, being brought home as ballast, at a very low freight. There must, therefore, have been a profit upon that. In the *Times* of the 9th of January, 1847, there appeared an extract of a private letter from Auckland, dated 8th September, 1846, in which the writer observes—"Four copper mines are now at work, and in four months I intend opening another—they pay very well. One (the Kaw-aw) will, it is supposed, net 60,000*l.* next year." By the Australian papers lately received, we find that 573 tons of Kaw-aw ore had been shipped at Sydney during the year 1847. We are, therefore, surprised to learn that the directors have had to raise a loan, and unless some satisfactory explanation be given, we must attribute it to bad management. We are quite aware that some alarm was at one time created by a rumour of the spontaneous combustion of the ore in the ships; but, if this were the case, it could easily have been remedied by roasting it; by recent advices, however, this alarm appears to have entirely subsided—a fact proved by the renewal of shipments. Another cause of delay may have been the time necessarily required for erecting the furnaces for reducing the ore to regulus, or for smelting it. This we believe to have been the intention of the company, for which purpose the necessary materials and competent men were sent out in June, 1847. We have not heard how the experiment has succeeded; but, if at all practicable, such a course would be the best for the company to adopt, considering the present low price of copper ore.

We strongly recommend that it should, at least, be reduced to regulus; but let us make a very moderate estimate of the assumed profits, even allowing the yield of the mines not to be more than above stated, and the produce per ton to average 15 per cent. (say, 12 tons per day for 300 days), 3600 tons; this would yield, at 15 per cent., 540 tons of pure copper, and, at the present very low price of copper, 79*l.* 10s., would realise the gross amount of 42,930*l.*; deduct for raising the ore, smelting charges, and freight (say, 50 per cent.), 21,465*l.*, and there remains 21,465*l.*—being a net profit of upwards of 20 per cent. upon the capital of 100,000*l.* from the mines alone, without calculating what may be obtained from the sale of wool, &c.—a considerable quantity of which is annually sent home, the company also possessing, as our readers are aware, large numbers of sheep, cattle, and tracts of land; and we must not forget the addition to their mining property, inasmuch as they hold a considerable share in the Bon Accord, adjoining the Burra Burra, and of which very favourable accounts have lately been received. Now, in the above estimate we have allowed, as nearly as possible, 40*l.* for making a ton of pure copper, including the raising of the ore and freight home, or to India, which latter may be taken at 15*l.*, leaving 25*l.* for smelting charges, at which, if at all, it can certainly be done in the colony. The same ore would cost the smelters at Swansea about an average of 12*l.* per ton of copper—the British ores costing about 14*l.*, and the richer foreign about 9*l.* We should say, therefore, that our estimate falls far short of the reality, if properly managed by persons acquainted with these matters. But if it be not practicable nor profitable to carry the ore through all the smelting processes before bringing it home, we have every reason to believe that it could very advantageously be reduced to regulus—thus saving a large sum in freight, of great consequence, particularly at the present time; while, under the Act of Parliament lately passed, the duty would not be higher than for the ore—namely, 1s. per ton. The only way in which we can account for the loan being required, is to establish the smelting works to carry out the plan we have been proposing; but, even should this be the case, we can scarcely imagine that so large a sum as we have heard can be wanted; for the wool received in the season of 1846 alone, together with the ore arrived and sold up to that time, produced about 10,000*l.*—some of which, we presume, was profit; and more wool we should suppose has been sent home last year or this, besides also the 573 tons of ore shipped at Sydney during 1847. We recommend the directors and shareholders to take their position and prospects into serious consideration. Do not allow such advantages to be abused, and adopt proper measures before it is too late. Nothing but a misconception of their value, or a want of confidence in the management, could make the 1*l.* paid-up shares of such an undertaking worth only 4s. each—the price they were sold for at Aberdeen on Tuesday last, the 3d inst.

The members and friends of the ROYAL CORNWALL POLYTECHNIC SOCIETY commemorated the 16th anniversary of the establishment of the institution, in the Polytechnic Hall, Falmouth, on Wednesday week, when the extreme fineness of the weather brought to the scene a highly respectable and numerous company, among whom were members of some of the first families in the county. We are happy to find that, notwithstanding the general depression which has existed in Cornwall, in common with other parts of the empire, the exhibition on the present occasion was in every respect superior to any which preceded it. Never in the mechanical department were so many ingenious and useful instruments and machines exhibited—a description of several of which will be found in another column; nor ever did so many good paintings adorn the walls. The most pleasing improvement, however, was in the school productions, and those of youths lately left school; and so great was the general excellence, that the judges awarded prizes to the extent of 40*l.* or 50*l.* more than the fund set apart for that purpose. Sir CHARLES LEMON (the chairman) stated that, rather than saddle the funds of the society with this excess, several members had commenced a subscription to defray this expense, which he considered necessary; and any persons who felt disposed could add to the subscriptions. In sculpture and modelling, the exhibition was exceedingly rich; and several busts, and other productions, were by Mr. BURNARD, a Cornish artist.

Among the articles in the mechanical department, was a cheap instrument for surveyors; trammel for describing the helix; three machines for measuring the velocity of the piston of a steam-engine, or other variable velocities; models of steam-engines; improved assay balance; new lock; jet for burning gas issuing at high velocities; improved slotting machine; instrument for extracting the broken part of a borer from the hole when blasting; air-pump; engine for cutting teeth in wheels; arithmescope; model of machine for raising and lowering miners; model of windmill applied to thrashing corn; dipping needle; trammel for describing the teeth of toothed wheels; locomotive engine, new principle; shoes made by a blind man who had never been taught; models of Baldhu and Gunwalloe Churches; mowing machine; models of ships, cannon, and other articles. There were also a number of excellent drawings and other school productions, including maps, penmanship, &c.; a collection of ladies' fancy work, comprising crochet, patchwork, fancy flowers, Berlin work, slippers, beautiful shell-work, &c.; architectural and mechanical drawings; cases of birds and insects; marine shells; botany of Polperro and neighbourhood; foreign Crustaceæ; specimens preserved in Canada balsam; humming birds; lithographs; kaleidoscopic designs; fine barley grown from Bicke's prepared seed; British moths and butterflies; geological specimens of rain-drops on sand; and various other objects of interest.

Among the paintings sent in for exhibition only, were some fine specimens of the old masters—CORREGIO, RUBENS, VANDYKE, CASSALI, WATTEAU, JAN VICTOOR, Sir PETER LELY, OPIE, &c., from the collections of gentlemen in the neighbourhood.

A plan was submitted for the improvement of Falmouth Harbour, by constructing a tidal basin of 12 acres in extent, and with a depth of 20 ft. at low water spring tides, with accommodation for 18 of the largest class of steam-vessels, besides a large amount of ordinary merchant shipping. A space of seven acres to be converted into a spacious graving dock, with all necessary offices, even for a Government arsenal, if required; the estimated capital was 100,000*l.* There were three machines exhibited for determining the velocity of the piston of a steam-engine in its ascent and descent. One of these machines was worked by an air-clock; another by a water-clock; and the third by a sand-clock. The instrument for extracting the broken parts of borers, was well calculated for the purpose. The exhibition throughout was confirmatory of the advantages which had resulted from the establishment of the society, and the rapid progress in the arts and sciences, which had taken place under its auspices; and we trust an institution of so high a character will not, on a future occasion, have to resort to subscription to make up the amount of the prizes awarded by the judges. It is an institution which ought to be considered a county object—Cornish in its character and interest—and should be supported by Cornish gentlemen and the public. The offers of prizes for various productions, have elicited a vast deal of talent; and many valuable inventions have been brought before the public, which, perhaps, but for this, would never have been thought of in mining and various other callings. We trust another year will see the funds of this institution in a more flourishing condition, and thus enable it to extend its advantages to the community in a corresponding ratio. In addition to the general company, the Lords of the Admiralty, and a distinguished party, paid the exhibition a visit, having arrived at Falmouth, in the *Undine*, on naval business.

Our attention has been drawn, on more than one occasion, by correspondents to the system observed—with railway companies more especially—of interest being allowed on capital subscribed for carrying out the several projects, it being contended, that the shareholders advancing their money should be entitled to interest thereon, and hence we find, in the several Acts of Parliament, that a clause is introduced, authorising the directors to pay interest on the capital subscribed, until the railway, or other works, shall be completed. It is hardly necessary to say, that this assumed interest on capital is nothing more nor less, than a return of, say 4 per cent., or 1-25th of the capital annually, and might just as well have been retained by the shareholder, as doled out to him under the fallacious title of interest. Our correspondent, whose letter appears in our columns of to-day, having again mooted the question, we are induced to enter upon it, and by adducing an imaginary case, endeavour to show the absurdity of adopting a system, which is merely a course of self-deception. Let us suppose a railway company established, with a capital of 800,000*l.*, divided into 20,000 shares, of 40*l.* each, and which is projected for the construction of a line of railway of 30 miles in length, the estimate of which, including buildings, locomotives, and all the necessaries, would be after the rate of 26,666*l.* 13s. 4d. per mile. To proceed, let us next assume that the formation of the line will occupy four years, or an average expenditure of 200,000*l.* annually. It is, however, only right to assume that, what with Parliamentary charges, investment, purchase of land, &c., the outlay for the first 12 months will extend to nearly one-third the amount—or say, 250,000*l.*—the residue being called for in equal annual drafts of, say 185,000*l.* Now, to carry out the supposed case, it is to be assumed that the Act of Parliament giving power to the directors to allow 4 per cent. interest on the calls, until the company shall have carried out their project, and be in in a position to make returns on the capital invested, such sum must necessarily be paid from some source other than profits, and which it appears to us must necessarily be abstracted from the capital. If this be admitted, it will be seen, that on the 250,000*l.* paid up in the first 12 months, the mean, or average, six months' interest thereon, at 4 per cent., would be 5000*l.*; at the expiration of the second year, interest is to be added for 12 months on the 250,000*l.*, and six months on 185,000*l.*, additionally called during that period—together 13,700*l.*; the third year the interest is to be calculated on 435,000*l.* for the 12 months, and another 185,000*l.*, being a further amount called for, making a further sum of 21,100*l.* in the shape of interest; and the fourth year we find the interest on the capital paid up (620,000*l.*) to amount to 24,800*l.*, and on the remaining capital taken in like manner at six months, to 3700*l.*, or 28,500*l.* Thus, it will be seen, that the interest payable out of capital for the first twelve months is 5000*l.*, the second year 13,700*l.*, the third year 21,100*l.*, and the fouth year 28,500*l.*—or in all 68,300*l.*, being a reduction of upwards of 1-12th of the capital, the real expenditure on the line being only 731,700*l.*, instead of 800,000*l.*, on which the estimates were made in the first instance. As our correspondent very properly observes, the revenue thus obtained by the shareholders is merely a return of their own capital, or, in other words, instead of subscribing 100*l.* on their shares, they virtually subscribe 96*l.*, the remaining 4*l.* being returned them at the expiration of the 12 months, and in like proportions.

It will, doubtless, be in the recollection of most of our readers, that not many years since a Mr. THOMAS SAUNDERS CAVE embarked in mining pursuits, upon the principle (?) of paying to the adventurers, or shareholders, who placed their funds in his hands, 10 per cent. per annum interest, *until* the mines should be yielding remunerative returns—no matter whether in 18 months or 18 years; and, accordingly, numerous members of the church and the law, with some good old ladies and retired tradesfolk, placed in the hands of the *ci-devant* War-office clerk, a sum of between 300,000*l.* and 400,000*l.*, to *invest* in mining undertakings, all holding out the first promise. Now, we take it, that if these worthies entered into any calculations, or estimates, they must have seen that the 10 per cent. per annum must either have been paid to them out of their own capital, or out of the private funds of Mr. CAVE. This, we believe, is the only instance as applied to mining adventures; but it is universal, or nearly so, as relates to railway schemes. We had almost forgotten to mention that, after duly paying the dividends for some twelve or eighteen months, Mr. CAVE failed in his enterprise, and the capital was lost; at the same time, it must not be forgotten that the sage adventurers received 10 per cent. per annum for eighteen months on the capital they had advanced, and therefore were only *minus* 85 per cent. Having thus shown the absurd principle which is advanced, we think it requires only that parties possessing capital should exercise common sense, and not allow themselves to be misled. In the case we have assumed, we have not taken into consideration the probability, or, judging by the past, we might say, the certainty attendant on the estimates being exceeded; in which case it is hardly necessary to add, that interest on debentures, loans, and preference shares, take precedence, and increase the dead weight on the concern by the abstraction of capital in the shape of interest.

Whatever may have been the depression in our metal trades during the past year, or the dearth of business at the present moment, they may be considered as absolutely flourishing, as compared with the coal and iron trades of the United States, according to the reports of the press, which give a most deplorable account of their present condition and prospects. They state the trades to be in an embarrassed and truly wretched condition; notwithstanding the low price of coal, there is no demand, stocks are fearfully accumulating at the wharves, and at present prices there is a loss of from 10 to 20 cents on every ton raised in Schuylkill. The cotton factories and print-works near the sea-coast, are all stopping, the iron-works, except, perhaps, a few favourably located, ere long must also stop, for it is impossible for them to compete with foreign manufactures, at the rates at which they are thrown into the markets. The following increase in the importations of iron into the port of New York alone, is looked upon as one great cause of the depression in the American coal and iron trade—viz.:

	1846.	1847.	1848.
Bar-iron	*Tons* 6690	14,259	13,600
Pig	„ 7700	19,500	23,960
Sheet and Hoop	*Bundles* 20,428	67,000	75,532

The well-informed among coal-dealers consider the country will not require so much as last year, and already has there been an increase in the quantity raised of 150,000 tons. A general opinion is stated to prevail among both miners and dealers, that nothing less than a three or four weeks' cessation from business can better regulate the supply to the demand, and raise the ruinously low prices, which none can long stand. Six or seven of the largest Schuylkill collieries are said to have stopped, and several others partially so. If these complaints are founded on facts, how strange the contrast between that country and England; the former with its free institutions, its broad extent of territory, fertile lands, and active sons of toil, in a state of the utmost commercial distress; the latter just recovered from a severe panic, and escaped upon the verge of that anarchy which has shaken Europe to its centre, looking forward with confidence to the approaching year, for an extensive renewal of trade, and a return of that commercial prosperity which has so fertilised our favoured isle.

COMMERCIAL PROGRESS AND RAILWAYS IN SOUTH AUSTRALIA.

We have received, by recent arrivals, the following statistical data, showing the rapid increase in the commercial transactions of the above colony, only first trodden by a small body of British colonists in 1836, and certainly not established until two years later:—

Years.	Imports.	Exports.	Value of copper ore.
1843	£100,000	£81,000	—
1844	119,000	95,000	£ 4,099
1845	185,000	148,000	17,179
1846	330,000	313,000	54,168
1847	380,910	304,591	171,883

The population is now upwards of 33,000; there had arrived to settle in the colony, during the past year, 5600 persons, principally English and Irish, and the annual revenue had reached 67,946*l.* The increase in the value of the produce of the mines is the most extraordinary feature; while the prospects are a still greater proportionate increase. The proposed railway from the city of Adelaide to the port, a distance of five miles (a company for the construction of which is forming in London, and which is advertised in our columns) created much interest, and would, no doubt, be a valuable boon to the colonists, and a profitable undertaking to the owners. The goods traffic between the city and port exceeds 40,000 tons annually, nearly all carried in carts, drawn by oxen, costing, on an average, 10,000*l.* per annum; and, however unsatisfactory may be the state of the money market here, we should think, from the number of persons of capital connected with the colony, and interested in its success, there will be no difficulty in the promoters carrying out the project. The Government have intimated a wish to promote the undertaking, and, with this view, will grant the public land necessary for the railway free. Independent of this, it is estimated that the line can be constructed for 4000*l.* per mile; and, if successfully carried out, of which we have no fear, this short line will probably prove the pioneer to the general introduction of the system into Australia.

IMPROVED RAILWAY CATTLE CARRIAGES.—A patent for a new carriage for the conveyance of cattle, sheep, &c., on railways, has been taken out by Mr. W. J. Cannon, of Cambridge, the object of which is to save the manure which is now wasted. The improvement in the construction of new trucks consists in the introduction of an open floor of transverse bars, slightly ridged, or reeded, to secure a sure footing, made of galvanised cast-iron, or other metal, or wood. Beneath the floor, a vessel, or tank, is attached to the bottom of the carriage, to receive the dung and urine that passes through the floor; and this tank is provided with a sluice, by which the contents are drawn off at the end of the journey, and deposited in a proper receptacle. The ordinary trucks may be rendered suitable to the purposes of this invention, by the application of an open floor, above the former floor, which is to be converted into a tank, by lining it with galvanised iron, and providing it with a sluice. The patentee recommends that the trucks for cattle, sheep, swine, &c., should be divided into compartments for holding one animal each.

IMPROVED WATER FILTERING MACHINE.—A patent has been taken out by Messrs. Smith and Sturges, of Birmingham, for a "water filterer," which, for simplicity in its arrangements, and perfect action, is equal, if not superior, for convenience and economy, to any yet introduced. It consists of a chamber formed in two parts, between which is placed a piece of sponge, this vessel is then screwed on to the pipe from the cistern, furnished with a tap, and the filter is complete. Water, for ordinary purposes, may be drawn direct from the cistern as usual. The sponge can be taken out and cleansed whenever required with the greatest facility. Their patent includes some other modifications of the invention, by which a greater quantity of water than ordinarily required may be filtered, and the cleansing operation is performed by a reverse motion of the tap or valve. From their low cost, they are within the reach of the most humble dwelling—the quantity delivered by a moderate sized one is about 8 gallons an hour. They are formed of Britannia metal and are very ornamental.

PROSPECTS OF BRITISH MINING AND METALLURGY.

[Continued from last week's Mining Journal.]

We are bold enough to believe, that such of our readers as have followed our statement of the burthens pressing upon continental industry, given in our two last Numbers, are better able than before to understand the nature of the political crisis that has taken place. Its true origin is, to the full, as much industrial as political. An artificial, social, and economical system, was worked as far as it would go, by unconscious Kings and Ministers, who thought they were keeping things steady, while, in fact, they served as a police power for their subjects during their grand experiment. Had the experiment proved successful—had it been possible to found manufacturing systems, as was attempted in Prussia and in France, under protecting prohibitions—or could an agricultural state, like Russia or Austria, get rich, while deprecating commercial interchange, we may be well assured that the discarded Ministers, and the courts of Vienna, Berlin, and Paris, might have remained in undisturbed possession of their power, and might have even used it more despotically than they did with impunity. But, when the people could get on no further—when profits came to a stand still, and wages could not be paid, the wisest of counsellors could not avert a revolution; nor will the most patriotic Minister restore peace to those countries until a radical change in the industrial system af all those countries has been effected. Prussia must give up the tolls and other regulations which strangle trade. Austria must do the same. France must renounce her system of bounties on manufactures exported—her prohibitive duties on coals and iron, and on cotton goods—her navigation laws must be scattered to the winds—cattle and corn must be allowed to enter duty free into those parts whose soil or climate is more suited to the cultivation of other numerous products which her agriculture can boast of.

But such a change would be at once to get rid of privileges; and privileges have of late been so adroitly mixed up with professions of industry, and of patriotism, that, even while impelled by despair to revolutions and civil wars, the hungry multitude is tempted to respect the privileges of the farmer, the forest grower, and the weaver, by which the market for labour is narrowed, and his earnings are destroyed. At least, no voice has been raised against the prohibitive commercial tariffs of France, Austria, and the Zollverein, although it must be clear that the people in all those countries are suffering fearfully under their operation. No statesman has condescended to acknowledge, that the old school of politics is worn out, and that *no political system can last that is not founded on the prosperity of the industrious community.* Generals Cavaignac, Radetsky, and Wrangel are supposed to be able to cast their swords into the scale against idle shipping, idle looms, idle shafts, and cold furnaces. We can all calculate how such expectations are likely to be fulfilled. A move in the right direction was attempted in Italy, but has been paralysed by the interference of foreign cabinets. With a free press, public courts of justice, and representative assemblies, the Italians demanded free trade; and had they been encouraged, instead of being decried as men seeking only the destruction of order, Italy would by this time have served as an example to other states. Prosperity would have followed a revival of trade, and the jealousy everywhere testified at a regeneration of those five countries would have been forced into the arena of commerce, where it would have been productive of the most beneficial results, instead of adding battles and blockades to the other sources of suffering now abroad. Every manufacturing and trading country is interested in the emancipation of Italy, and each was appealed to in terms that could not be received with indifference, when a customs' league was proposed for the Italian states, based on the most liberal tariff of Europe.

Before leaving this part of our subject, we are desirous to recal to the minds of our readers the fact that the leading statesmen of the Congress of Vienna—Hardenberg, Münster, Bernsdorf, and others—were fully impressed with the notion that no security could be anticipated for their new political creation without freedom of commerce, by which prosperity was to be ensured to the people, and, consequently, stability was to be conferred on the re-constructed thrones of Europe. It is even probable that the views of these enlightened men went far beyond those of the English Ministers present, and that this was the true reason why Lord Castlereagh and the Duke did not think it necessary to exact any explicit promise on this head from the other allies. At the subsequent Congresses of Aix-la-Chapelle, Laybach, and Verona, it is well-known that very different sentiments prevailed, and the continental sovereigns, lulled by that time into the belief of the permanency of military dominion, were no longer anxious to improve the means available for commerce; for the simple reason, that they believed the prosperity of the people to be dangerous to despotic power. There can be no doubt but that they were in the right; but they mistook in imagining that to impede prosperity was the remedy for the danger. It was a common saying then, that "hot heads must find enough to do in boiling their pots;" but there was an oversight in forgetting that the hot heads are not likely to be cooled by this exercise, and that when it becomes too difficult a task, the fire thus kept up may threaten a general conflagration—this is what has come to pass.

The treaty of Vienna has been interpreted pedantically enough, according to its letter, by the old-school politicians, and sufficiently to the discouragement of all improvements demanded by public opinion. But there was nothing in the spirit of that treaty to warrant the withdrawal, either by Austria or Prussia, of 5,000,000 Italians, 7,000,000 Poles, and 12,000,000 Hungarians, from a community of earnings and exchanges with the rest of Europe. The restitution of the commercial balance, which, as we have said, was always present to the minds of the real negociators at Vienna, in 1815, would, even now, suffice to dispel pauperism from this quarter of the globe, and to reconcile all petty jealousies between manufacturing and trading states. We repeat the enumeration which we made in a preceding article, that, between the mouths of the Vistula, the Adriatic Sea, and the Black Sea, an agricultural population of 35,000,000, unshackled by the theories of Berlin, Vienna, and Paris, and unfettered by the faulty investments of capital which paralyse the actions, as well as the judgment, of our German, Austrian, and French allies, now loudly demand the liberty of opening unimpeded commercial connections with Great Britain, and will esteem the accomplishment of this aim as one of the chief benefits to derived from their newly-conquered freedom.

In order fully to appreciate the spirit which pervaded the Congress of Vienna on this subject, and to prove with how little reason any of the clauses of that treaty can be held up as opposing the just demands of the populations of eastern Europe, it will suffice to recal the various stipulations made for insuring security and liberty to trade. The great object that treaty held in view, was to strengthen Germany against France. It was assumed that this end could only be attained by promoting and facilitating trading intercourse in the interior. For this purpose, it was stipulated that the great trading cities should remain free republics—that the navigation of all rivers should be free—that no state should impede the transit of the goods and subjects of another state—and, finally, that the Diet of the Confederation should, without delay, proceed to equalise the different weights and measures, as well as the coins in use, in various states of Germany. The passages of the Dardanelles and of the Sound, were declared to be open for commercial vessels. Cracow was also declared to be a free town, with an inviolable territory. The progressive augmentation of various tariffs which followed, was certainly not looked forward to during the Congress; but the closing of the rivers upon which we have dwelt, was in direct violation of its positive stipulations. It is needless to say, that neither the weights and measures of Germany, nor its coins were assimilated by the Diet, and the freedom of the republic of Frankfort was as unquestionably violated by Prussia and the other Zollverein states, when that city was forced to join the Zollverein, as the freedom of Cracow has since been wantonly trampled under foot by Austria. We trust, therefore, that we shall no more hear the treaty of Vienna alledged as justifying such wanton infringements of the spirit in which that treaty was undeniably concluded. We trust also that our sympathy will not be demanded for Governments holding political systems subversive of that commercial intercourse, upon which it is equally evident, that the leading men in Europe, in 1845, thought that public tranquillity and prosperity could alone be durably founded.

We find it impossible to express our opinion more concisely and clearly than by stating, that the key to the difference between the countries now passing through revolutions and England, lies in the question of wages. The fund out of which wages must be paid has been encroached upon by other interests in France, in Germany, and in Austria. It was spun to the finest thread by ill-judged speculators, and has broken in the hands of those Governments. In England, on the other hand, the fund for wages has been allowed to grow under the impulse of stern (internal) competition. There has been no appeal to favouritism against talent and intelligence. This sacred fund, therefore, subsists in its full extent, and the man who knows that his labour is his capital, knows, too, where to look for the interest on his stake in the country. [Next week we purpose following up the view we have taken, in the fields of banking and finance.]

RAILWAY INTEREST—EMIGRATION AND COLONISATION.

A most interesting scene was witnessed, on Wednesday evening last, at the Mechanics' Institute, at Swindon, where is centered the locomotive and engineering manufactory of the Great Western Railway Company—showing most clearly the great interest with which the subject of emigration to our Australian colonies is viewed by the better informed and higher order of mechanics in this country. A large number of the men employed are under notice to leave, owing to the determination of the company to stop the progress of branches and subsidiary lines leased to, or intended to have been made by, the company. The men so circumstanced, wishing to find a new and profitable field for their labour, invited a deputation from the Colonisation Society, to enlighten them on the subject; and, accordingly, Mark Boyd, C. D. Logan, and A. H. Forrester, Esqs., were received by a crowded audience in the most gratifying manner possible. The majority of the resident operatives, with numbers from a distance were present, as also several females, whom the information that household servants were much wanted, had greatly interested.

Mr. A. Sturrock (the manager of the Swindon Works) was unanimously voted to the chair, who, on introducing the deputation, remarked on the importance of the subject, and the high standing and ability of the gentlemen forming the deputation, whose information and data were drawn from actual experience and personal observation in the colonies, and obtained from the best possible official sources.

Mr. Boyd considered it particularly fortunate, both for the mother country and our fruitful possessions at the antipodes, that Mr. Logan should be in England at a moment like the present, when our whole population seemed to be thoroughly awaking to a sense of the absorbing importance of turning to a prudent and obvious, but hitherto comparatively neglected account, the advantages the colonial empire of Great Britain had placed at the disposal of its people in connection with emigration—the only means of establishing an equipoise between redundant labour and limited demand for it, on the one hand, and limitless demand and an inadequate supply, on the other. Mr. Logan came to this country the bearer of the confidence and the wishes of the principal inhabitants of New South Wales to the Home Government; and certainly it was only due to the Colonial Office, to say that he had met with a degree of attention in all repects worthy of his mission. Many of the leading magistrates of the metropolis, and of England at large, had put themselves in direct and uninterrmitting communication with him since his arrival here a few months ago, in reference to a question of scarcely inferior social interest to emigration itself—namely, penal or criminal discipline, to which subject he had devoted the most minute attention; and the Colonisation Society considered themselves fortunate in having secured his co-operation during his stay in England. Mr. Boyd then detailed at length what they had been lately doing at Brighton, Southampton, and in London. The Australian colonies were doing all in their power, making every sacrifice to get labour from England, where it is every day becoming of less and less value. Up to October last, 170,000*l.* had been received here to dispatch hands, for want of which an incalculable amount of the finest food and most valuable produce was perishing. Since then from 50,000*l.* to 60,000*l.* more had been received, and more still was on its way hither for the same purpose. This money was not Government grants, wrung from obnoxious taxes. It accrued from the natural wealth of the colony—the sale of lands, and the voluntary offerings of the colonists—and all was devoted to obtain that of which Australia could not have too much, nor could we part with too much—viz.: labour, of which every species and description, that was accompanied with health and good behaviour, procured the owner a competence to begin with, and an ultimate independence to all of moderate age, and of provident and self-controlling habits. He then explained the manner in which the society assisted, by part payment of passage money, other emigrants than agricultural—similar, for instance, to the majority of those he was then addressing.

Mr. Logan, who was received with much cheering, detailed the result of upwards of a dozen years' observation of the labour market in New South Wales, its supply and demand, and the consequences of a scarcity of hands in the colony generally, and of sudden gluts in particular spots on certain occasions. He showed, that though certain handicrafts in iron and metals might not obtain an immediate market, yet a readiness to turn one's hand to anything, together with the intelligence characteristic of a good English mechanic, would always, at the very outset, procure in the colony an equivalent to his full ordinary earnings at home, and that his skilled labour would be, of course, proportionably recompensed, when legitimately rendered available, the prospect of its so being increasing every successive day. Mr. Logan then invited his hearers to put questions to him, which should elicit information precisely suiting the views of each interrogator; when many of the operatives proceeded to catechise the gentleman with much shrewdness, evincing a large amount of acquired knowledge respecting the Australasian colonies. Mr. Logan replied distinctly to each point, and in every case to the complete satisfaction of the inquirer. Besides the rates of wages, he gave them full information of the sanitary state of the colonies, the mode of obtaining land in small portions, prices of supplies, wearing apparel, rent, and a variety of other things, on which his long household experience in the colony enabled him to be most explicit. As respects the seaworthiness of emigrant ships, he mentioned a striking instance of the stringency with which the Emigration Commissioners enforce their rules. A merchant of great eminence in the city had informed him, within the last few days, that he had been compelled to spend 3800*l.* on one of the vessels so chartered, though any private trader would pronounce it perfectly fit to take the most precious cargo to any part of the globe, without one penny outlay in repairs.—Mr. Logan received many thanks from a highly-gratified audience, and presented the institution with maps, colonial journals, and publications of the society.—Mr. Boyd proposed a vote of thanks to the chairman, whom he had known many years, and whom he highly respected, which was seconded by Mr. Forrester, and carried with enthusiasm.

Mr. Sturrock adverted to the compliment that had been paid him, and went on to say how deeply he felt the painful duty the directors had, with the greatest regret themselves, imposed upon him, of discharging a large number of their workmen. This did not arise from any cause injuriously affecting the Great Western property; quite the contrary, as they all knew. They were not diminishing the the number of their engine-men, or stokers, or their locomotives; so far from that being the case, they were rather adding to them, consequent on the Westbury, the Wilts Somerset and Weymouth, and the Torquay extensions; but, unfortunately, such was the state of the money market, such the depreciation of all railway property at present, that the directors could not think of proceeding with further extension, either in the shape of their own tributary lines, or of lines they have leased from other companies; and, therefore, the present reduction of their establishment was equally a matter of necessity and of duty, and every person would admit its propriety and justice, even those who most suffered by it. Happy, indeed, should he be if it should lead to the proceedings of that evening being speedily or ultimately beneficial to the parties injuriously affected; and he was quite sure, that in saying so, he spoke the cordial sentiments of the body he had the honour to serve as manager of their works at Swindon. After some further remarks, as to the probable value of the information the deputation had afforded, the meeeting broke up.

The Locomotive Engiemen and Firemen.—A very gratifying meeting of delegates from the men employed upon the various railways, that have terminal stations in the metropolis, was held, a few nights since, for the purpose of taking preliminary measures to carrying out, on a comprehensive scale, a benefit society, from the funds of which members of this intelligent and well-conducted body of men may find relief in sickness and distress. It was resolved that immediate steps should be taken for consulting the drivers and firemen of the various lines of the kingdom, on the advisability of promptly forming and enrolling such a society, and a strong protest was made against entering into any subscription, or taking any proceedings that should warrant even the inference that the men desired to form a union against their employers. The opinion unanimously expressed was, that if a disagreement similar to the one which recently took place between the drivers and firemen engaged upon the London and North-Western Railway, and the authorities of that company, should occur again, whatever assistance the men might require should be raised by voluntary contributions; but that no funds should be collected in anticipation of, or for, carrying out any such disagreement. The men appeared anxious it should be understood that they are opposed to unions and combinations.

Powers and Duties of the Railway Commissioners.—From a return of the powers and duties incident to the Railway Commissioners, as at present exercised, and just issued, it appears that between 200 and 300 Acts of the past and preceding session contain provisions by which, on a variety of subjects, questions relating to railway companies are referred to their decision. Their general powers under special Acts are also very extensive, and embrace the duty of entertaining and investigating charges against railway companies for non-compliance with the provisions of their Acts, of inquiry into the circumstances and causes of all railway accidents, of examining into all the railway bills of the session, and Acts passed by the Legislature of the Colonies for railways when referred by the Secretary of State. No railway is to be opened without their certificate of inspection. They have power of interfering and regulating branch communications with different railways, so as to insure public safety, to regulate the speed of mail trains, and to provide cheap trains, with discretionary powers as to starting, speed, stations at which they stop, with seats and protection from the weather.

Railway Calls.—The list of calls for the month of October shows the total capital required as 1,573,905*l.*, being more than one-half less than the amount in October, 1847, and as nearly as possible to the same extent below that required of shareholders last month. The total amount of calls during the present year is, to the end of October, 29,952,770*l.*, against 37,605,355*l.* to the same period in 1847, or a reduction of 7,652,585*l.* The amount on account of foreign lines is, in the present month, 412,500*l.*, against 420,000*l.* in the same period last year. The following are the particulars of the calls made during the present year:—

	Foreign.	English.	Total.
Due in January, 1848	£221,590	£4,638,630	£4,860,131
Due in February, "	132,000	2,140,541	2,272,542
Due in March, "	1,287,000	1,848,922	3,135,920
Due in April, "	550,000	2,209,795	2,759,795
Due in May, "	38,500	3,208,348	3,246,848
Due in June, "	118,379	2,159,365	2,277,674
Due in July, "	176,750	3,900,496	4,077,246
Due in August, "	99,422	3,023,351	3,122,773
Due in Sept., "	66,000	2,559,936	2,625,936
Due in Oct., "	412,500	1,161,405	1,573,905

A Colliery Horticultural Show.—We learn from a correspondent that the workmen of the Team Colliery, Gateshead, have established among themselves a society for awarding prizes for the best specimens of culinary vegetables and flowers, produced by the colliers during their leisure hours, when above ground. A show and distribution of prizes took place last week, and the competitors afterwards partook of dinner at an inn in the neighbourhood of the colliery. Prizes were awarded for potatoes, cabbages, cauliflower, &c., and for dahlias, of which several varieties appear in the list; pansies, African marigolds &c. The example set at the Team Colliery might be followed with advantage,

Original Correspondence.

MM. RIVOT & PHILLIPS'S PROCESS.—ANTHRACITE.

Sir,—In your two last numbers you have given details of the new process of MM. Rivot and Phillips, for smelting copper. The practice there mentioned, of throwing small pieces of coal on the fused metal, is in some measure already adopted; but as the coal should be such as approaches nearest in its composition to charcoal, the small of the best anthracite (which contains from 92 to 94 of carbon) is that which our smelters now use, and which ought to be used in MM. Rivot and Phillips's plan, to render their process more perfect, and prevent the greater loss in the weight of the iron bars introduced into the fused copper. In many letters, your valuable correspondent (T. H. Leighton) has advocated the larger use of this species of coal (almost carbon itself) in the reduction of the copper ores; and I agree with him, that it would be attended with great advantage. The present reduced profits of many of the Cornish mines makes economy in all departments more than ever necessary: ere long the practical results of a plan, now being tested, for working their boilers efficiently, with the culm or small of anthracite, will be laid before them, and having, it is anticipated, a large saving per ton in the cost of fuel—an item of no small importance.—Carbon: *Oct.* 2.

COPPER SHEATHING.

Sir,—I trust Mr. Prideaux will excuse me in not having replied to his communications earlier. My furnace has been let out, for repairs, and I have consequently been very much engaged in attending on the masons, which will, I trust, plead my excuse.

In reply to Mr. P., of 16th Sept., I beg to say that we test our refined cake copper by *acids*. I will repeat once more (although having mentioned in my first and second), that the metal should be brought forward in the roaster to *blistered copper*. If Mr. P. thinks differently, I should be glad to hear his reasoning on the subject.

The smelters' object has always been to get the utmost produce out of the ore, and to purify the copper as much as possible.

Very pure copper is required to mix with zinc, to make Muntz's metal, and also for other purposes. I have not the least doubt but that the hard or bell-metal, that remains after the fine regule has been taken away, for making best-selected copper, *well roasted*, will make as good copper sheathing as if the light regule had been left to remain, but there will be a little more waste in rolling. The Irish ores are the best for making cake, and the Australian malachites and carbonates for selected copper.

In reply to Mr. P., of 30th Sept., great care should be observed not to calcine the ore too much, or you will bring the metal prematurely on, with all its impurities, which will puzzle even a roaster-man to eradicate.

The intermittent calcinations practised in Germany, have nothing to do with ours; there ores are very poor, and will very well bear such processes; but ours is a rich ore, averaging 20 per cent. for copper, besides the large masses of other metals, which at once combine with each other. If the granulated *ore metal* be well calcined, the next smelting process will carry away most of the iron.—A Roaster Man: *Oct.* 4.

THE LAST QUARTER'S SALE OF COPPER ORE.

Sir,—I have looked over your comprehensive summary of sales in Cornwall and at Swansea during the past quarter, and your remarks or deductions drawn therefrom; and as I do not exactly comprehend those applying to the sales in Cornwall, I have to request the favour of being set right. You say that the depreciation of the past quarter, compared with that preceding, is 992 tons, and the amount in money 12,160*l.* 18s. less; and you then go on to observe that, notwithstanding this decrease in the produce, there is some room for congratulation, inasmuch that the severe depreciation in price, to which you had directed attention, in giving the return of the quarter ending June, had not marked that just expired. I must say, I do not exactly understand your reasoning; for it is clear, that while the quantity of ores is about 1000 tons less, the money is 12,000*l.* and upwards—thus placing the rate of the diminished quantity at 12*l.* per ton; while I find that the average price of the ores sold was under 4*l.* 10s. per ton, so that the deficit in money would represent 2700 tons, or thereabouts, instead of 1000 tons. On referring to the prices obtained in the preceding quarter, I find that they averaged nearly 4*l.* 14s. per ton, which difference, on 39,200 tons, the total sales for the quarter just terminated, would give a difference of nearly 8000*l.* It may, perhaps, be, that the produce of the ores has been less, and that there has not been a further depressed standard to contend with; but as you simply give the sales in the aggregate, as to quantity and value, without reference to average standard, or produce, I cannot arrive at any correct conclusion, without entering into the calculation, by reference to the several ticketing papers. As you are, doubtless, in possession of this information, I think it best to invite your attention to the subject, so that you may elucidate the matter, as, doubtless, you will, to the full satisfaction of your readers, among whom I beg to subscribe myself as one—Investigator: *Oct.* 3.

[In making use of the observation, "there is *some* room for congratulation, that the severe depreciation in the prices to which we called attention in our June return of the previous three months, has not marked the quarter just expired," we by no means intended to imply that the mining interests of Cornwall were in a prosperous state; but that, although there was still a falling off in the amount of sales and price, they were something more in proportion, and that it was nothing like so serious as the previous quarter, when, although there had been an astual increase over the former return of 4356 tons, the amount realised was less by 7442*l.* 1s. On referring to the returns, our correspondent will find but little difference in the average produce and price of the two quarterly returns in question, and, therefore, justifies us, we think, in the hope that better prospects await the miner and adventurer.]

MANGANESE IN THE ASTURIAS.

Sir,—In addition to the important seams of coal, iron, and mercury, which Nature has so bountifully supplied the province of Asturias with, there are lodes of copper, lead, zinc, and manganese, which are not so well known, or thoroughly explored, in proportion to their merit. At present, the lodes containing manganese have only been sufficiently worked to give any idea of their value; this mineral has only been found in one locality, called Joós de los Grayeros, in the circular valley of Vega de Coemya, in the parish of Cou, about a league and-a-half to the eastward of the famous sanctuary of Covadonga, in the district of Cangas de Onis. Near the peaks of Europa, the highest of the Sierras, of Covadonga, the manganese presents itself in round stones, covered and enveloped in the alluvial soil, deposited in a small lode, which exists on the ridge of the mountains about 200 varas above the level of the deepest valleys, which surround the base of the mountain. The rock which constitutes this Sierra, and the proximate ones, is intermediate and transition limestone, containing as well metalliferous calcareous spar; the minerals which present themselves are oxide of manganese, grey manganese, the bi-oxide of manganese, and the manganese of commerce. Some of these stones, when broken, show the radiated texture of grey manganese; while others have a fine grain, a grey colour, and an imperfect metallic lustre. Hematite iron accompanies these varieties, particularly the first, but it is separated from it with great facility. The explorations which are open to grass have not proceeded further that 6 varas in depth; the deposit, however, has a surface of 40,000 to 50,000 square varas, and, probably, extends to the setts registered in the neighbouring Sierras of Caves, under the name of St. Pelago y Covadonga. The mineral of manganese enters largely in the preparation of chloride, and its uses in the manufacture of glass is well known, in order to purify it from the green colour which the oxide of iron contained in the other materials used in the fabrication give to it. Some quantities have been exported from the port of Rivadesella to manufactories in the south of France, and various experiments that have been tried in those of Gijon and Aviles have produced good results.

It is to be hoped, that as the industry and the mining capabilities of the province of the Asturias are developed, that this branch of riches, for want of sufficient capital, will not be allowed to lie dormant. At present the transport would be rather heavy; but as it is on a descent, and roads are being made near it, these difficulties would be, by degrees, overcome; and as labour is cheap, there is no doubt that, in addition to its other accessories, at no distant period the produce of manganese will form an important item in the mineral wealth of the province of Asturias. C.

London, Oct. 5.

ON THE METALLURGY OF IRON, AND ITS METAMORPHIC CONDITIONS.

Sir,—Being desirous of seeing a continuation of Mr. Radley's letters "On the Metallurgy of Iron, and its Metamorphic Conditions," in your valuable columns, be pleased, Sir, to permit me, as a favour, to ask him to elucidate his own queries, nor delay, for the expressions of others, in all

probability less capable than himself to the exposition of *rationales* of these most important characteristics of the iron art. I was in hopes that Messrs. Heath, Mitchell, "Ferreus," Mushet, or some other of your talented correspondents would, ere this, have given us their opinions and experience on these *ten important topics* of a little known subject; as they have not done so, I can only hope that nothing may prevent Mr. Radley from the development of views and facts, to acquire which, much time, perseverance, and indomitable energy must have been applied, as, I presume, he would not have put the queries, unless perfectly capable of answering them, by bringing forward positive facts. G. N. Dark.

Cookham Dean, Berks, Oct. 3.

PEAT-CHARCOAL OF DARTMOOR FOREST.

Sir,—There is scarcely any portion of the economical distribution of the good things of this world, for the use of man, more extraordinary than the reservation of vast tracts of substances, destined one day to be of almost infinite importance to him, to the very moment when, either his advance in civilisation, or the exhaustion of a previous substitute, renders their discovery essential to the further progress of his moral and physical energies. Scarcely have two centuries passed away since the extinction of the once mighty forests of England, rendering a substitute absolutely necessary, as well for the cottage of the labourer as for the forge of the smith. The almost simultaneous discovery of the vast coal-fields of Staffordshire, of Lancashire, of Wales, and of Scotland, at once supplied an inexhaustible stock of fuel, and created an iron trade which has supplied food and labour to hundreds of thousands, and covered the ocean with its progeny, in the shape of steam-ships, and the earth with a network of railways.

But the very perfection to which the various branches of this trade have been carried has created a new want; our beautiful productions in iron and steel render a purer fuel so essential, that we are actually importing, at an enormous cost, iron smelted by means of the pure and *sulphur-free* charcoal grown in the forests of Russia and the bogs of Poland. Who could imagine that, with this want so severely felt by the most enterprising of all our manufacturers, by our ironmasters, and by our copper and tin smelters, that a store, almost boundless, of the purest of all carbon, has lain for ages unheeded a few feet beneath the surface of the vast tract of Dartmoor Forest, and requiring only the aid of the chemist to render it, at a slight expense, a charcoal-field, infinitely more extensive than the primæval forests which once shaded the broad fields of England. But I have no right to say, "*unheeded*;" for a few enterprising smiths have, for centuries, regularly burnt peat-charcoal on the "*forest*," and produced ironwork therefrom that has given them deserved celebrity. Only last month, in cutting for the railway of Messrs. Davy and Wilkins, the workmen cut through one of these ancient charcoal hearths, of great extent, and so very old, that nine inches of solid peat have, since its desertion, grown over it.

But Chemistry is now extending her empire over this long inert mass, which, by decomposition, she has separated into—1. Sulphate of ammonia, the most valuable of agricultural manures—2. Naphtha, so useful, both for lamps and for dissolution of gums for manufacturers.—3. Tar.—4. Stearine, or pure tallow.—5. Oil, adapted for common soap, or lamps; and, lastly, pure charcoal.

The latter is by far the most important of these products; and those enterprising gentlemen, Messrs. Davy and Wilkins, after satisfying themselves, by long-continued experiments, that charcoal, in a state of perfect purity, was to be obtained, in any quantity, at a cost little, if at all, exceeding that of common coke, have at length, by the judicious expenditure of a large capital, succeeded in completing works capable of manufacturing 18 tons per diem, and carrying a railway of wood, between 3 and 4 miles in length, into the very heart of Dartmoor, from the hills of which their carriages, loaded with turf, may be seen descending from a height of nearly 12,000 ft., without engines or horses, impelled entirely by their own momentum. The fires of these works are already lighted, and the samples produced have, by their density and purity, astonished many gentlemen, who expected a soft and friable substance. A very few more weeks will elapse before the works will be in operation, and the contracts already entered into with iron and tin smelters will quickly bring to practical test the extent to which those metals will be improved by the total absence of sulphur in their reduction; and, as Messrs. Davy and Wilkins have a grant from the Duchy of Cornwall of upwards of 13 square miles of the very best tract of Dartmoor, their powers of production will be bounded only by their own desires.

If you think your readers will be interested in the progress of these works, and in the construction of the powerful presses which are now in contemplation, and which, by drying the turf by power, will make Messrs. Davy and Wilkins independent of either weather or seasons, I shall be most happy to communicate to you the particulars of operations, when they get into full work.—J. W. Hodgetts: *South Brent, near Ashburton, Sept.* 30.

[We shall be very happy to receive an occasional communication from our correspondent, descriptive of the progress of the works; and which will, doubtless, prove of general interest to our readers.]

BLAENAVON IRON AND COAL COMPANY.

Sir,—Mr. Deakin's letter, in your Journal of the 23d instant, is an unjustifiable attempt to damage the concern in the eyes of the shareholders; and that they may not form a one-sided view of the matter, I think it necessary to explain the motives of the writer, and show his real position at the Blaenavon Works, and I trust, Sir, that you will in justice insert my reply in your next paper. I must premise my remarks, by expressing my astonishment, that our directors should still retain in their employ a servant who so grossly insults them and their manager. The true state of the case is this—that the recent inquiry into the affairs of the company brought to light many crying abuses, among which was, that the numerous relations of Mr. Deakin, to the number of nine, were enjoying the best berths, to the exclusion of better men. His salary was accordingly reduced 50*l.* per annum, and his son, brother-in-law, and nephew, dismissed the company's service. This has evidently greatly incensed the old gentleman, and he vents his spleen in your columns, though, from his usual style, I suspect more reached your office than you cared to hazard the respectability of the *Mining Journal* by printing. It is scarcely necessary for me to assure your readers, that Mr. Deakin is capable of the coarsest abuse of those who offend him, or to call their attention to the numerous scurrilous and coarse attacks made by him on nearly all the celebrated scientific men of the age—attacks which, in some instances, have reflected little credit on your columns. Now, when inquiry is being made into his numberless blunders, and his former power curtailed, he comes forward, and endeavours to show that he is in no way to blame for the company's misfortunes; the furnace manager he makes the "scapegoat" of his own misdeeds. I assert, and am prepared to prove, that one of the chief causes of the Blaenavon Company's recent financial position is this very Mr. Deakin—who, now that inquiry is being made into his past conduct, turns round, like a dog at bay, and snarls at his employers. The arguments used by Mr. Deakin are of so flimsy a nature, and his facts so distorted, that I feel it quite needless to analyse them. I will only select one as a sample. He states, that when a certain person was ill (meaning the late furnace manager), a coal was used at the furnaces that had been till then rejected, and that the furnaces worked as well as usual. This is far from being the fact, for the furnaces were nearly gobbed up in consequence, and the coal, of course, rejected on the furnace manager's return to his duties. Mr. Deakin endeavours to persude us that *his* "scape-goat" is alone to blame for the misfortunes of the company; but this is mere idle assertion, and an abortive attempt to injure a tried servant of the company, because he has always very properly rejected the rubbish the mineral agent thought fit to send to the yards. It is but very recently that large quantities of mine, more expensive to get than the favourite "Bottom Vein," were sent to the kilns, and the best of this so-called mine contained but 18 per cent. of iron, with 10 or 11 per cent of magnesia—a powerful anti-flux. My object in writing this letter, is to inform my fellow-shareholders that Mr. Deakin's statements are not to be relied on, and that he is actuated by a spirit of vengeance against the company for the disturbance of his family compact; this is sufficiently obvious, or he would have warned us in time, and not at the last moment, when the company's affairs are in desperate case, and give the death shout with such hearty exultation. Had Mr. Deakin come forward, as by his own showing he ought to have done years ago, he would have been listened to with attention, for it is well known he has ever enjoyed unlimited power at the Blaevavon Works—all that he has asked has been done, nothing was too expensive or too good; and yet he talks like an injured man and a victim of prejudice; but for all that, I again assert, and am prepared to prove, that Mr. Deakin has had a larger share than any other individual in producing the unfortunate condition of this company's affairs. I will only adduce one or two instances of his blunders and mismanagement. In the year 1845 Mr. Deakin made numerous complaints and representations to the management on the expensiveness of pit-wood, then costing the company 1300*l.* per annum; he ultimately succeeded in getting the management of the pit-wood entrusted to his son, the consequence was, that the cost gradually increased to 2300*l.* per annum! and I can myself have testimony that very little pit-wood is used underground.

His gaffer system in the coal workings has produced an annual serious loss to the company. The system is this—that the gaffers deliver coal at the pit's mouth at a certain price per ton, and pretend to keep the underground roads in repair, the company finding horses! With such an arrangement as this, it cannot be wondered at that the Blaenavon Company have more horses in proportion than any work in South Wales, and that their keep amounts to the enormous rate of 58*l.* per head per annum. It would be a useless waste of time and your space, were I to enumerate the blunders committed by Mr. Deakin; I think I have sufficiently shown forth the moving spirit, in his violent phillipic against the company; and, in conclusion, I cannot help noticing his uncalled-for attack on the company's present manager, from whom he has received uniform kindness and attention; but whoever stands in his way is, sooner or later, sure to find his confidence miserably misplaced. I fancy the directors can now say the same, but they have brought it all upon themselves, by their narrow policy and illiberal views.—Veritas: *Sept.* 30.

THE COPPER DUTIES QUESTION—THE MINING INTEREST.

Sir,—I observe in your paper, of 30th ult., two letters, which I consider well deserving notice, as emanating from gentlemen, both of whom are known to the mining community and the commercial world, not only as members of the Legislature, but as connected with the mining interests—the one, as one of the representatives for Birmingham, being intimately associated with the metal trade, and the other, as one of the Members for Truro, and mixed up with mining adventures as a banker, and otherwise being no less important. I have, Sir, watched the movements of the representatives of the mineral districts, and also those who might be considered in some way associated with their interests, and regret that I have to arrive at a conclusion so opposed to the estimate I had previously formed. I will, however, Sir, to the more particular object of my missive, which is to offer some few passing observations on the letters cited; and, although I do not accord with the conclusions at which the Legislature have arrived, or the arguments put forward, it will be my object, in remarking on the letters, to confine myself to the points mooted therein.

I first approach the letter of your correspondent—Mr. G. F. Muntz. It would appear that the conclusions drawn by your correspondent (to which the letter of Mr. Muntz is put forward as an explanation, or reply), that an error had arisen as to the meaning to be applied to the words used, and hence the hon. Member stands so far acquitted; but it is with the latter part of his letter that I have to do. The learned Member unequivocally states, that he "had, individually, no wish for the repeal of the duties, and could have liked to have seen copper higher instead of lower; but (adds the hon. gentleman) my constituents were differently situated; they had a just claim to have copper as cheap as their opponents, after they had lost the protection of their own trades against foreigners; and it was *my duty to them to urge that claim.*" It is not necessary to follow the hon. Member, whose letter is, as a whole, like himself, undisguised, and direct to the point, while he says, "it was not his wish to see copper reduced in price, or the duties repealed." This I can understand well, so far even as his private interests are concerned—for, inasmuch, that his "yellow metal" coming in contact with copper for sheathing of vessels (the former containing only about 40 or 45 per cent. of that metal, combined with 55 to 60 per cent. of zinc), it is quite clear that the higher the price of copper, the greater profit he would derive on his manufacture of 3000 or 4000 tons a year of yellow metal, which I suppose to be his make; or, by a correspondent reduction in price, holding out greater advantages to the consumer. I cannot leave the letter of the hon. Member without contrasting it with that which immediately follows it in your columns—that of Mr. E. Turner. The one openly declaring that he voted not so much that he fell in with the views propounded by Government, but that he did so in unison with the wishes of his constituents, and in support of their interests; while the other admits that he opposed the wishes and the interests of his constituents, and offers a paltry excuse for severing from the opinions he expressed some six or seven years since. I will, however, take up his letter; and, although I may not be so *sharp* as himself, at least, endeavour to convince him that I am not so great a *flat* as to be floundered by his attempt at figures—thereby evidencing, doubtless, in his own estimation, his perfect fitness for the office of Chancellor of the Exchequer. I must say I like the hon. gentleman's modesty which peers out in his very first sentence—"I feel I trespass on your indulgence" (quoth he)—while methinks he might have added, "and also that of your readers." Your correspondent, "Publius," he tells you, is well known to him, which appears to me to be of very little matter to one or the other, as it is with facts we have to deal; and no attempt at wit, or inuendo, will, I think, serve the hon. Member. I find he has yet in memory his school-boy days, for the fly on the coach-wheel, which exclaimed, on its successive revolutions, "What a dust we make," and the little episode of "How we apples swim," appear to be well remembered by him. He commences with Lord John Russell, with whom he connects the names of Mr. Labouchere and Lords Lansdowne and Grey, and then tells us, on *his own* authority, that "the British empire—the world itself (a trifling deviation from Shakspeare)—cannot produce four more distinguished and honourable men." Now, this is kind on the part of the hon. Member for *Tru*-ro; for most *true* it is (pardon the barbarous pun, Mr. Editor), that he has not to apprehend the compliment being returned in any case where the hon. Member may form one of the quadruple alliance. Let me, however, do the hon. gentleman every justice. Now, says he, "as regards *myself*, 'Publius' supposes that *I* denied there had been a petition from the mining districts in Cornwall against the copper bill. *I* never said anything of the kind; what *I* did say was, that the mine *adventurers, as such*, had not petitioned." They do say down west, that they who do turn can spin; and that we have here a *turner* who can spin a long yarn, I think is pretty clear. What a mountain of a mole hill!

The hon. gentleman proceeds to observe, that "Publius" declares, at the very time when this expression fell from him, that 20 petitions, with 10,000 signatures attached, had been presented; but here we have a most satisfactory and convincing answer. Mr. Turner says—"It is somewhat singular, it was in *reading* these 20 *petitions* (not the *signatures*, be it observed) that *I* came to the conclusion that the mine adventurers had not petitioned—and hence *my* authority;" while he follows on—"*I still say, the great mining interest of our county is in favour of the repeal of the duties on copper ore.*" After a statement thus put forward by a Member for Truro, a banker and mine adventurer, being advanced through the public press, I think it behoves the Cornishmen, "one and all," to demonstrate pretty clearly, at the next election, how far he has belied them, and compromised their interests by the course he has pursued. The hon. Member next approaches figures; and here he is most unfortunate in his deductions. He should be aware that he is handling a two-edged sword, and that there are two views which may be taken of a question, in the same way as there are two sides to a ledger, or a balance-sheet. We are told, that for the quarter ending 25th March last, the produce of 89 mines was 195,212*l.*, out of which 33 yielded 180,213*l.*—thus leaving the remaining 56 only 14,999*l.* between them, or, on an average, 285*l.* each. Of these 56 mines we are told, on the "authority" of the hon. Member for Truro, that 26 produced under 200*l.* each, 19 under 500*l.* and 11 under 1000*l.* each. Now, without going into fractions or decimals, I will content myself with the figures quoted; and I think, upon a simple calculation, by two of the first four rules of arithmetic, it will be found that, instead of 14,999*l.*, the amount is 25,700*l.*; this, however, is a trifle, so I will pass that by. The hon. Member then most grandiloquently asks—"What would the protective principle have done for those 56 mines? I will tell him: they would have held out encouragement to the maiden mines, whose capital is embarked in search of mineral, and whose returns are but as the first fruits reaped from their enterprise. On looking over your share list, I find that there are no less than 200 mines; and as your correspondent only takes 89 mines, it must be quite apparent that he does not even do himself and his cause full justice; for, according to his account, only 33 mines are working, to any extent, in the shape of returns; and hence 167 are said to be not coming within the scope of observation, as having, in any way, a claim on protection; the 33, according to his opinion and "authority," not requiring it. Thus is it too frequent—those who are anxious to get forward in the world, are told that they require no aid, simply because others are not in like necessitous circumstances. But here let me say a word or two with respect to these 33 mines, of which the hon. Member, in the next sentence, thus boasts—"The 33 mines need fear no foreign competition." We have the "authority" of the hon. Member for this; for, while he contends protection could have done nothing for the others, because they are only in course of development, he says these are beyond all danger. Will the hon. Member be pleased to look to the Ticketing Paper of some four or five years past, and compare it with that of the past week? Will he calculate the difference arising from the variation in price of ores of a certain standard of that day and the present? and will he inquire, and note the results of the inquiries he may institute, as to the consequences attendant on the reduction in the standard upon those mines which yield the largest produce, and let him ask any one intelligent and practical man, what will be the result, and he will be told that it is the *deep* mines—those yielding the largest returns—and which form the majority of those he includes in his list, that have to fear the alteration in the duties on the import of foreign ores? If, for instance, we take the Consolidated Mines, the United Mines, Tresavean, the Roskear, Wheal Seton, and Carn Brea, it will bb seen that these mines range from 100 to 300 fms. in depth, employing from half-a-dozen to 16 or 18 engines each, and that they are necessarily worked at an excessive cost—so that *they* are really the mines which will be first to feel the consequences, and not those which are comparatively virgin mines, and near to surface. So much for the hon. Member's conclusions. I find, however, in further pursuing his observations, that "it is true Lord Redesdale presented to the Lords a petition, signed by 21,543 persons; but (adds the hon. Member) it is no less true, that this petition no more represented the mining interest than did the 20 petitions presented to the House of Commons."

It is quite clear from this, on Mr. E. Turner's "authority," that the petition was a regular made up concern; and as the hon. Member, doubtless—and, indeed, must have—read, not only the petitions, but the names of the subscribers thereto, he doubtless feels himself perfectly warranted in asserting that, out of the 21,543 signatures, he could not discover any part of the mining interest represented. "Another petition (saith he) was presented by the Earl of Falmouth, from an 'individual;' that individual was Mr. Treffry—a distinguished man, and worthy the imitation of his class," which is one, we may safely say, to which the hon. Member will never belong. The change which has come over the scene, as to the opinions publicly expressed, and the acts of the hon. Member since 1842, he shuffles out of, without any explanation, beyond that of the passing of the Corn Law in the interim, exclaiming boldly—"If I have been inconsistent, it is my having adopted a principle, and not afraid, to carry it out." Let me whisper in your ear, most immaculate legislator!—it is want of principle that allows you thus to swerve; and, in taking my leave of you, I have only to say, that you have, in your effusion, fully effected the object you say, in closing your letter, you had in view—that of "avoiding, as far as possible, the general question."—Publicus: *Oct.* 4.

BRITISH COPPER SMELTING COMPANY.

Sir,—I have read with much interest the several communications in your Journal of late, on the subject of copper smelting, and on the numerous advantages which would result from the establishment of a new company. I am happy to see, by the able letter of your correspondent, "H. E.," last week, that measures are still in progress for the formation of the company, which, I understood a short time ago, was contemplated. I am quite aware that such an undertaking will be attended with considerable difficulties, but still I am persuaded that they can be overcome by perseverance, and if the promoters and directors do not act rashly, but have all their plans well digested, and work out their object systematically. The act for reducing the duties on foreign ores, lately passed, ought of itself to influence every one engaged, or interested, in mining pursuits to take a prominent part in forwarding a new copper smelting company. The state of the mining interest of Cornwall is at present bad enough; but what must it be when the new bill is fairly in operation? Why, we have begun to see its effects already. As you recorded on the 23d ult., nearly 3000 tons of copper ore arrived from Cuba alone, during that one week. And the monthly returns of the Board of Trade, for the seven months ending the 5th of August of the present and the two preceding years, show that the quantity which paid duty in the first seven months of 1846, was 29,501 tons; ditto 1847, 21,539 tons; ditto 1848, 32,752 tons—showing an increase this year over the quantity paying duty in 1846, of 3251 tons, and over that in 1847 of 11,213! It must be remembered, that the announcement of the reduction of the duties was made by Lord John Russell early in the year, and, therefore, there was, at all events, time for the news to go out to Cuba, and to have received shipments by this time. Now, it may be asked, how is another and an independent smelting company to remedy the evils to be apprehended from this increased influx of ores? I believe it requires no demonstration to those at all acquainted with the subject, to prove that the present smelters are in the enjoyment of immense profits—even at the present low price of copper (79*l.* 10s.) it amounts to fully 20*l.* per ton. On account of the strict monopoly of the trade, they always take care to lower the price of the raw material which they purchase, in a much greater proportion than they do the manufactured article which they sell. In confirmation of this, I may refer you to a valuable communication of one of your correspondents, in which he proves that the value of the ore required to make a ton of pure copper had fallen 27*l.* 14s. 9d. since 1842, whereas the price of copper had fallen only 11*l.* during the same time! Well, then, this fact being established, I ask whether a profit of from 20 to 30 per cent. is not a little too much, when compared with that gained in other branches of trade? And this obtained, too, not only at the expense of the miner, but of the public? I think the principles of free-trade are now, in a great measure, admitted to be correct. I think it will be conceded, that if you make a useful article cheaper, you will increase the demand, and the additional consumption will eventually counterbalance the reduction of the price.

I could give several striking instances of the truth of this maxim. I have no doubt, Mr. Editor, your are old enough to remember the furious opposition of the agricultural labourers to the use of thrashing-mills, about the year 1830. And you must also be aware of the persecution which the inventors of the machines used in the cotton manufactory were exposed to. This mistaken spirit led these misguided people to great excesses, because they imagined that the increase of machinery would throw a number of people out of work; but the employers were able to produce so much cheaper, and more speedily, that their trade increased immensely, and, in a very short time, the number of hands employed was far greater than before; and, although wages may have been lower, the means of living were cheaper. This had an indirect effect, also, on other branches of trade. Again, look at the consequences of the monopoly which was possessed by the East India Company. During the first 20 years, the produce brought from India is said to have cost only 356,288*l.*, whereas it produced here the enormons sum of 1,914,600*l.*; and, in 1834, when the company's commercial charter expired, the exports to India were only 3,421,421*l.*; and, in 1844, but 10 years after, they had increased to 7,695,666*l.*

The effect, therefore, which I should imagine that a new smelting company would have, if properly managed, would be to open up the trade, and, being content with one-half the profits at present realised, to make the average price of copper cheaper, and thus greatly increase its consumption. There can be no doubt but that it would be used much more extensively for ships, &c., if this were the case; and the augmented importations of foreign ore would then do no harm, but would be a benefit to the country. I am quite sure that the miner might get a better price for his ores, and yet the smelter make a good profit. I cannot allow that the latter is *entitled* to the full profits of a smelter and a merchant; if he combines both, he ought to be content with less for each than if he were only one or the other. I hope that the new company will soon be in operation; for, if it adopts the course I have proposed, it will not only increase employment, but benefit the trade of the country.

In confirmation of what your correspondent, "H. E.," states, with reference to the late Copper Miners' Company, I have very good authority for saying, that their profits from copper smelting were very large, and that the causes of their ruin were their collieries and iron-works, with which I would advise the British Copper Smelting Company to have nothing whatever to do.—J. H. M.: *London, Oct* 4.

RAILWAY SIGNALS.

Sir,—I would suggest that the guard of every train should have a lamp affixed to the carriage where he is placed, which might be so constructed as to convey three or more signals, in addition to, or rather in lieu of, the ordinary light used. This might be effected by the lamp being made circular, and a series of coloured silks or glasses made to revolve or pass round an outer frame—so that, by a handle or connection-rod, the guard might at once convey to the engineer information, by placing the green, red, blue, or other colour, immediately before the bull's-eye. This might be so easily done, and without incurring expense, and not being likely to get out of order, that I think, among the many suggestions put forward, it is worth mentioning—others may improve it. A Traveller.

IMPROVEMENTS IN THE ROTARY ENGINE.

SIR,—Having noticed in the columns of your valuable paper some remarks on obtaining and applying motive power, I must expect similar opposition to that, accompanied with a condemned diagram, in relation to this long-studied and still unsatisfactory invention (at all events, from what I have read and seen), as regards application to motive power, with the rest of those who seek for improvements in the mechanical world. I have long endeavoured, by perseverance and close thinking, to arrange some of my own original ideas in a drawing, which I have now in my possession, and which I have termed, on account of having received encouragement from different engineers, "improvements in the rotary engine." This is a kind of engine which has excited the interest of men who have been ranked at the head of science, yet it seems to be void of undoubted approbation. I had this plan in course of drawing in March last, and had finished it, and shown it to those who I thought to be men of experience and judgment, but in the meantime I saw, in one of the columns of your valuable Journal, that Mr. Kinsman had secured a patent for an engine of this description, and I thought to rest awhile, to witness the proceedings; but I have not yet seen anything in what has been introduced, after viewing things without prejudice, that I consider so durable as the one in question; this will be to work expansively, with the steam shut off one-sixth of the round, its motion also may be quickly reversed, the piston is a fixture, which is an advantage to those on hinges. If those persons who are interested in bringing into action the engine under consideration feel disposed, I shall be glad of assistance or partnership in the same. It could be adapted to various purposes for fixed engines, and it then remains for general application. Further communications will be readily responded to, on addressing to me (care of Mr. Appelton, Hanwell, Middlesex).

October 5. S. HOLMAN, C.E.

IMPROVEMENTS IN OBTAINING AND APPLYING MOTIVE-POWER.

SIR,—Let "Steam" be whoever he may, his conduct in attacking my inventions in the manner he did in his first letter, and then shielding himself behind an anonymous signature, is unworthy a *professed* veteran of science; and until he, like men of honourable intentions, attaches his proper signature to his effusions, I shall deem them unworthy of further notice. Should you be able this week to afford space for the engraving and description of my rotary engine, your readers will have an opportunity of forming a fair estimate of the value of his opinions on mechanical matters; and, probably, it will be better to withhold any account of its working until after its fate has been predicted.

Your respected correspondent (Mr. De la Haye) appears not to have quite a clear perception of my auxillary apparatus for propelling railway trains; nor could it well be expected that that gentleman, or anyone else, should at once perceive *all* the advantages that would accrue from its adoption. I am aware that, "to propel a heavy train at high speed *is* rough work;" and the heavier the engine, the rougher and more dangerous the work—and I considered that, by reducing the weight of the engine, *one-half*, or more, was *something* in the way of improvement; and the economising of fuel and water, I thought was another, and not less, important advantage; and, as to preventing *collisions*, I think that my arrangement offers at least as great, if not greater, facilities for preventing them than any plan at present before the public. The propelling tube, it must be understood, yields a power *irrespective* of the "bite" on the rails, and can at any moment be employed to check the progress of the train, without in the slightest degree depreciating the vacuum in the condensing pipe—indeed, it might be employed, when desirable, in descending inclines, &c., to improve the vacuum. These are advantages which I think are not secured to the same extent by any other invention. I have two other arrangements for propelling railway trains, in which steam is employed, and the engine is dispensed with; but, as it will be better to give diagrams to illustrate the principle, I will not enter into a description of them at present. I do not think that it will be very easy to devise "less expensive apparatus" for making available the steam after it has passed the cylinders of the locomotive; and, if the power derivable from condensation is applied to the driving-wheels of the locomotive engine in the manner suggested, or as patented, by Mr. T. Craddock, the engine must necessarily retain its present weight, which I think has been rightly considered one of its "greatest faults"—for, of course, the heavier the engine, the more it cuts and tears the rails to pieces, which must also be heavier and stronger than for lighter engines; and to secure anything like perfect condensation, by a different arrangement from the one I propose, will, I think, not only be exceedingly difficult, but cumbersome and expensive; and, again, if it was possible by other means to secure an equally perfect vacuum, it would not be equally effective for propelling the train, if applied through the medium of machinery to the axles of driving-wheels, as if applied direct to the train—for, in the latter case, the whole power is usefully applied—while, in the former, a large portion of it would be absorbed by the friction of the working parts.

Few, I think, will doubt but that a vacuum *can* be maintained in the propelling tube, without the slightest difficulty, by opening a communication between it and the condensing pipe, which, being immersed in water, would be kept sufficiently cold to ensure an almost instantaneous condensation of the steam; and, as some time—in some instances hours—will elapse between the passing of the trains, it will be impossible that the condenser should fail to perform its office. Now, it must be remembered, that if any volume of steam is let into the vacuum pipe and condensed, the vacuum still remains as good as ever, or nearly so, and but very little power is required to pump out the uncondensed steam and water; but if *air*, at atmospheric pressure, was admitted in the same way to a vacuum pipe, in which a nearly perfect vacuum previously existed, the effect would be to depreciate the whole vacuum from one end of the line to the other; and, unless the vacuum pipe was of considerable capacity, its power would soon be destroyed, and, in my opinion, it would be found impossible to work at above 8 or 10 lbs. to the inch; and if the air is not employed expansively, a considerable loss of power will be sustained; and, if employed expansively to the same degree as the vacuum, about 5 lbs. per inch would be the average effective pressure. This is about the power that Messrs. Cunningham and Carter will find available on their plan of atmospheric propulsion, so that very large engines will be requisite to yield the necessary power; and, I very much doubt, whether their arrangement will be found, in point of efficiency, to bear any comparison with working an atmospheric railway with a tube and pistons, similar to what has been described; and, if with them the cost of a set of engines, every 300 yards, has not been considered an insurmountable obstacle, surely the cost of a pair of pistons, at equal intervals, will be no very alarming affair. I believe that less than 2000*l.* per mile would cover the original cost for working a double line of railway on my plan; and if the reduction in the weight of rails, &c., is taken into account, it might not exceed 1500*l.*; and as, according to my plan, I can work at double the pressure per inch, with less original cost than any other system, I think I may reasonably hope that the public will afford the means of a fair trial.

Douro Cottages, Portland Town, Oct. 2. JOHN WESTON.

WHITE'S NEW PATENT GAS.

SIR,—In your Journal of the 30th Sept., I observed an article on my "Gas from Water," emanating from Mr. John North, of Rochdale-road, Manchester; and a few days since I also received a letter from the same party, the contents of which were similar to those contained in your Journal. It cannot be wondered at, that men, unacquainted with the science of chemistry, particularly gas making—excepting, perhaps, what they may glean from reading in *Partington's Encyclopædia*, the mode of making gas from resin—should meet with accidents in carrying on experiments of the most dangerous nature. My only surprise is, that the experimentalist, in operating on water and resin, had not only lost his life, but had been somewhat troublesome to his neighbours, by blowing their houses to pieces, as in the case of the well-known explosion in Albany-street, in July last.

Mr. John North appears to attach much importance to the *fact*, that he has produced *a light* from resin and water, but says nothing either of the *mechanical* or *scientific* method of generating this gas, merely describing it "*as different from Mr. White's*;" but I should say, if he were to put his apparatus to the proper test, so far as *practical* utility is concerned, he would find that he had not discovered anything very *philosophical*, or of much benefit to the public generally.

Being perfectly aware of (and which Mr. North may learn) the numerous experiments that have been tried by truly-scientific men, chemists, gas engineers, &c.—to my knowledge, at least, 100 or more—who, for the last 20 years, have more or less distinguished themselves in attempts to procure gas from water and tar, resins, fats, &c., with economy, ease, and facility, the whole of which have proved failures, in one way or other, in accomplishing their object.

In my specification of patent, I claim, and limit my claim, to a certain combination of *materials* (charcoal and iron, or charcoal and lime) for the purpose of decomposing the water, and a disperser, and iron or other chains, *properly arranged* for decomposing tar, oils, fats, "*or such like substances*," which, when heated to a high temperature, throws off bi-carburet of hydrogen. It is not, then, water, or resin, or tar, that I lay claim to, particularly, as a new feature in my invention; but *a combination of materials, and the use of iron, or other chains*, and a disperser properly arranged—so as to produce a powerful illuminating gas, and that free from the least objection in point of *easy manipulation*; and I have much pleasure in stating, that I have succeeded in accomplishing the production of gas from water and tar, or resin, &c., with the greatest ease, and the working may be carried on for an infinite length of time—having, at my own residence, an apparatus capable of supplying 150 lights, which has been worked for the last 15 months past, with the greatest ease and simplicity, and has been viewed by an immense number of scientific men, capable of forming an opinion, and from whom I have received the greatest praise and encouragement. I much regret to find scientific investigations taken up by mere pretenders to science, and who could be of no service in these respects to the comforts of their fellow-creatures; and, when *chance* has thrown something in their way, such men are quite incapable of explaining what they pretend to have discovered, or reason on what they observe, more especially as regards *water*, one of Nature's most bountiful gifts; by whose aid we now traverse the land with the rapidity of an eagle's passage in the air—by whose aid the earth is bedewed with moisture, and Nature's abundant gifts provided to us—on whose breast "Britain's bulwarks" float, and Nature's foreign delicacies supplied to us—by whose *power* mountains may be removed, and the labour of man relieved; and the time, I trust, is not far distant, when we may see our towns and dwellings illuminated by its aid, containing, as it does, the elements of fire itself.—S. WHITE: *Lincoln's Inn-fields, London, Oct.* 5.

INVESTMENT IN RAILWAYS AT PRESENT PRICES.

SIR,—It has often occurred to me that it would be well, at the present moment, to make an investment in railway shares when the market is so sadly and unwarrantably depressed, and which is clearly shown in your last week's Journal. I observe, that you therein cite the highest prices attained by the shares in eight several lines of railway in the year 1845, and the prices quoted at the present day—the amount paid being, I presume, with the exception named by you, the same at both periods. With the view of more clearly showing the difference which exists as to prices, I have entered into a calculation of the purchase of 100 shares in each of the companies, so as to exhibit more clearly the advantage presented to the capitalist of investment at the present time over the past; while, at the same time that I admit prices were carried to an extreme at one period, so do I consider such to have been arrived at, in an inverse ratio, in the prices quoted at the present moment. I will now proceed with your list, and take the market prices, as quoted by you on 100 shares—

Railways.	Cost—1845.	Cost—1848.	Reduction.
Eastern Counties and Northern and Eastern	£ 2,100	£ 1,275	£ 825
Edinburgh and Glasgow	9,150	3,900	5,250
Great Western*	23,500	7,700	15,800
London and Birmingham	24,600	11,000	13,600
London, Brighton, and South Coast	8,025	2,625	5,400
London and South Western	8,250	3,850	4,400
Midland	19,200	8,200	11,000
York and North Midland	11,300	5,450	5,850
Total	£106,125	£44,000	£62,125

* This includes 10*l.* per share since paid.

Thus, it will be seen, on these eight lines alone, I can purchase, at this moment, for 44,000*l.*, 800 shares, or 100 in each line, which, three years since, would have cost me 106,125*l.*, or 140 per cent more than at present. Thus, if 5 per cent. on my outlay might be fairly calculated upon in 1845, it is clear that I may now, or should, realise 12 per cent. on my present investment. It is true, I may be met with the observation that prices were carried to an excessive height in 1845, which nothing but the spirit of speculation would justify, in the same manner that mining shares, in times gone by, were trafficked in—as tulips were in earlier days; but I would ask, is not the present depression carried to an equal extreme? As it may be well to see what are the relative positions of those companies which I have above enumerated, I will adopt another mode of calculation, as further illustrating the vast difference which time presents. I find, for instance, the shares in the Eastern Counties are depreciated 40 per cent.; Edinburgh and Glasgow, 55; Great Western, 65; London and Birmingham, 60; London and Brighton, 70; London and South Western, 55; Midland, 60; and York and North Midland, 50 per cent. Such is the reduction in the value, or saving, which would be effected by purchases at present prices. I might follow out this, by referring to the interest or rate per share paid; but as this is readily done, and there is, moreover, a continuous fluctuation in prices, I consider my object achieved, if alone I draw attention to the subject, which well merits the careful investigation of your readers.—A RAILWAY SHAREHOLDER: *Oct.* 3.

PAYMENT OF INTEREST ON RAILWAY CALLS—THE SOUTH WALES RAILWAY.

SIR,—It is surprising how the public are gulled; and, I must say, it is equally a matter of surprise to me that you should allow a system to be pursued so dangerous in itself, and calculated, as it is, to mislead those innocent capitalists who, without entering into minutiæ, or satisfying themselves as to the source from whence their dividends arise, are content to be plucked as they do geese in Ireland, although, be it said, that while the former get a portion of their capital back, in the shape of return of principal, the latter yield their feathers without interest. I will, with your permission, take up the instance of the South Wales Railway, noticed in your last week's Journal—not that it is an exception to the general rule, but that it is one of the latest which has come under public notice; and it is put forward so prettily, that I think it is only due to "the merchants, proprietors of mineral lands, and others interested in the extension of the South Wales Railway," to direct your attention thereto.

It appears that a meeting was held, in the course of last week, to receive the report of a committee appointed to inquire into the expected traffic between Swansea and Llanelly; and, from the abstract which appeared in your columns, I find that a revenue, or income, of 7400*l.* per annum is calculated upon by the completion of this branch, the cost of which is roughly estimated at 75,000*l.*—thus yielding a return of 10 per cent., or thereabouts, on the capital required. I find, in the estimate, that Cameron's Steam Coal Company is set down as yielding 5650*l.* per annum, in the shape of traffic returns, being about 25 per cent. of the market value of the property itself; and, as the distance, I suppose, is not above 7 or 8 miles, allowing 1d. per mile as the traffic charge, it would, I find, require 3270 tons per week, or 650 tons per day, to pass over the line. I may be wrong in my calculations, as to distance and the rate per ton, but, I think, not so far in error as not to justify me in drawing the conclusion, that the parties "interested" in the extension line have a very high opinion of the Cameron coal-field, and are, *doubtless*, largely "interested" therein, judging from their estimate of the great output, or contemplated sale at the port of Swansea, independent of their land sale, or shipments, at Loughor. I will, however, pass over this point, to arrive at that which forms the sum and substance of my communication. And now I approach the "disinterested" advice and counsel to the public, put forward by these "interested" parties, and more especially to those who would be content with 12 per cent. per annum on their investment. To understand this, however, clearly, it is necessary to recapitulate the propositions put forward. The committee, in their report, suggest that the public should purchase up shares at the market price (say, 9½), and pay up the calls; while it appears, upon the same authority, that 28*l.* per share has been paid, and which sum is entitled to interest at the rate of 4 per cent. per annum, thus making it, at the present depreciated price of the shares, equal to 12 per cent.—the interest having, it is said, "been hitherto regularly paid," as if a doubt could possibly exist that, while capital was supplied, the interest should not be forthcoming. I will now approach the period when the capital is paid up, and the railway opened. I will not anticipate railway debentures, or loans, which, of course, have the first claim on any surplus arising over the current expenditure, but merely wish to direct you to the false position in which, I am afraid, too many parties are placed, simply from the want of information. Let them, then, bear in mind that, when the railway is completed, their interest on capital, as secured to them by the Act of Parliament, at once ceases, and they are then entitled only to whatever interest or dividend the returns of the line will justify; or, on the other hand, meet such further advances as may be required. This, however, is not the only question to look at, for it must not be forgotten, that their income, or interest, during the time which the line of railway is in course of construction, is simply a return of their own capital; so that it is, in fact, a deception which they practice on themselves. I think the remarks of your correspondent, in last week's Journal, on the affairs of the Blaenavon Coal and Iron Company, are much to the point; and I think you would only do right by calling attention to the subject. AN OBSERVER.

Swansea, Oct. 3.

[The subject had not been lost sight of; but we considered the case too clear to render any observations necessary. We have, however, acted on the suggestion of our correspondent, and refer to a leading article treating on the *principle (?)* of paying interest.]

MR. REED'S RAILWAY SIGNAL.

SIR,—I have been a constant reader of your valuable Journal from its commencement, and am, therefore, well aware of your unceasing desire to promote the public good by every means in your power. I notice with pleasure the publication, in your last Number, from the *Newcastle Journal*, of an article, announcing a device for a signal to the conductor of a railway train, in the instance of particular (individual or general) alarm experienced by the passengers. It was my intention to have addressed you on this very subject; and, although I have been so far forestalled, as the notice referred to goes, I beg leave to make a few additional observations on this most simple and, I consider, valuable design, trusting to your allowing me a place for them.

Stephen Reed, Esq., of this town—a gentleman of mechanical genius—is the author of this, and many other useful inventions connected with railways, some of which he has patented, and others, as the present, he has given philanthropically to the public. The signal now alluded to would have answered a serviceable purpose, in almost innumerable instances (and many of them very distressing ones), within my own knowledge; and I I earnestly recommend it to the attention of those influential persons who possess the power of bringing it into use, assured, as I, in truth, feel, that they will have cause of self-gratulation, by conducing to the public safety, and the individual comfort of a large proportion of the travelling railway community; for, irrespective (in the present case) of those fearful occurrences of collision, and other instantaneous stoppages, of which the hapless passengers have no previous intimation, the invention in question is intended to give relief, which can be, perhaps, effectively given, as in the following instances:—The occurrence of a fire—the breaking of a wheel, axle, or spring—the running of a carriage off the rails—the subjection to brutal treatment of an unprotected female—the presence of an insane person under sudden excitement, of which there have been instances—the dangerous illness of an individual, whose life even might be saved by the possible ready aid of a professional man—and many other occasions which might be mentioned, wherein the passengers possess no means of seeking relief in their distress, by communication with the conductor. I may here remark, that I have long thought, and am still of opinion, that the proper situation for that personage, is the extreme end of the tender, with his back to the engine, sufficiently elevated to command a sight of the whole train in his rear, when he could not help seeing any irregularity of motion in a carriage, or other occurrence requiring attention, and to which his prompt resort must, of course, be given, and the train stopped if needful. Besides, the advantage to be thus afforded by this position, another very important one would be the facility of communication between the conductor and driver; and another, the knowing where to find the former, his location at present being an indeterminate one. The man's back would be always turned to the wind, and he might be conveniently sheltered on that side. Thus, while the driver's sight was directed forward, the conductor's would be given (very commandingly) the other way, over his own proper charge.

Among other recommendations (although, when life and death are concerned, it ought not to be thought of), I understand the cost of this device is comparatively trifling—not more, or very little exceeding, 20*s.*—say, for one carriage, 4*l.*, which, I am sure, is an expense that ought not to weigh against its adoption. My advice to Mr. Reed, is to submit his apparatus to the Railway Commissioners, who, I think, would be impressed with its utility. I am afraid you may think I have been somewhat prolix in my observations, but I really am so convinced, that important benefits would arise from the application of the contrivance, that I have been led to speak of it under a somewhat excited feeling. B. THOMPSON.

Newcastle-on-Tyne, Oct. 2.

IMPROVED WATER-VALVE OR AIR-TRAP.—This is a common sink, or drain, trap, for the purpose of freely passing fluids through the sink, without the possibility of the escape of any filthy effluvia into the apartment, is a great improvement over the common bell-trap, and has been secured under the Designs Copyright Amendment Act. It consists of a square box cast on the top of a pipe, the latter occupying not quite one-half of the width of the box, and rising a little way in it, so that a portion of water always remains in the box. The remaining portion of the box is divided by a partition, projecting from the opposite side close to the top, and at an angle of 45°, just dipping below the water line in the box, and thus perfectly sealing the trap, and preventing any effluvia escaping from the drain. The trap may thus be considered divided into three portions—the entrance side of partition, the escape side of the same, and the exit pipe; and the first being the smallest opening, and the exit pipe the largest, it is clear that any substance which would require even forcing through the first, would easily escape by the second and third. From its formation it cannot become choked, or cause the sink to be flooded; and, being square, has one-fifth greater area than a circular one of the same diameter, and economy in the first purchase is secured.

TODD'S PATENT METALLIC PROTOXIDE PAINT.—From the peculiarly offensive properties of white lead, and its injurious effects upon the health of painters, and those employed in its manufacture, many attempts have been made to find a substitute, possessing the highest preservative powers and durability of colour, without the evil and disadvantages attendant on the use of lead as a pigment. We are informed, that the patentee of this paint has had numerous opportunities, since 1844, of testing its qualities in the most severe manner; he has found it peculiarly efficacious in preserving iron from oxidation, wood from decay, and masonry and brickwork from dampness. It perfectly unites with iron, even at a red heat, and is of great value, as applied to the coating of iron vessels, roofs, steam, water, and gas-pipes, and every description of iron-work, externally or internally. It is proof against the sun's rays, spray from salt water and sea air, and destroys and prevents the discolourations on stuccoed buildings from vegetation. We understand it has long been in use on the Great Western, North Western, South Western, Midland, York and North Midland, and other large railways; the new Houses of Parliament, British Museum, East India House, East and West India Docks, and at several prisons, hospitals, lunatic asylums, and unions—at all of which it has proved eminently successful in all the qualities of a preservative paint. It is also free from any deleterious effluvia during its use; and apartments may be inhabited the same day after painting. We have seen copies of numerous testimonials from engineers, architects, &c., of the above-mentioned and other establishments—all of whom speak of it in the highest terms possible.

IMPROVEMENT IN PROPULSION OF VESSELS.—Mr. Joseph Maudslay, of the firm of Maudslay, Sons, and Field, engineers, Lambeth, has secured a patent for a new mode of propulsion, consisting of a mode of attaching the blades of the propeller to the shaft, in such manner that the propeller will open to the proper angle for propelling the instant the shaft is put in motion, and return into an inoperative position when the shaft ceases to rotate. The inner ends of the blades are inserted into sockets, formed in the ends of the shaft; and to the shank of each two toothed segments are fixed—one above and the other below each socket—the two segments working into each other, so that the blades will always move together, the extent of their motion being determined by stops. On the shaft there is a sliding clutch, which can be moved along the same, to catch hold of either of the sets of pins projecting from the back of the segments. This clutch is worked from the deck of the vessel by means of a rod, the lower end of which has a screw-thread formed thereon, working in a swivel nut, attached to one arm of a bell-crank lever, the other end of which is forked, so as to embrace the clutch when brought down upon it.

HAVANA RAILWAY.—The following is a statement of the length of this railway—the only one, we believe, in the Spanish dominions:—From Havana to Guines, 51 miles; Guines to Reyes, 37; Ramal to Batabani, 11 1-10th; Ramal to San Antonio, 8¾; San Antonio to Guanajay, 14¾—122¾ miles.

SHREWSBURY AND CHESTER RAILWAY.—This line, about 60 miles long, passing through Oswestry, Ruabon, and Wrexham, is to be opened on the 12th inst. The viaduct over the Dee, in the Vale of Llangollen, is 150 feet above the level of the river, has cost 100,000*l.*—is 850 feet long, and surpasses any thing of the kind in England.

SWANSEA DOCKS.

A strange fatality appears to hang over the proceedings, or rather the want of proceedings, of those upon whose exertions rest the construction of these works, and when we consider that the prosperity—nay, almost the existence of Swansea as a flourishing sea-port—rests on the means of supplying dock accommodation to the numerous vessels employed in the increasing maritime trade of the town; it is marvellous that those more particularly interested, as inhabitants, as well as shareholders in the dock property, do not bestir themselves; and if the directors have not sufficient energy, are unable, or unwilling, to carry out the project with spirit, let them be called upon to resign, and let their places be supplied with men of business and activity. Some time since a meeting of shareholders was held, to consider what steps should be adopted under existing circumstances, when a committee was appointed, consisting of Messrs. Maxwell, Hutchinson, and Oakshot, to confer with the directors. That interview had taken place, and an adjourned meeting was held yesterday week to receive their report; in it they state that they were courteously received by the directors, who manifested every disposition to afford the committee the information required. They had been assured by the directors, that the present call, if paid up, will be sufficient to pay off all the liabilities of the company up to the present time, and that they would render an account at the next general meeting to the shareholders, *therefore the committee recommended that the call be paid up.* The committee had been informed by the directors, that the available capital of the company amounted to 48,480*l.*, and, therefore, they could not recommend that any steps should be taken to dissolve the company, or to impede the exertions of the directors; but, on the contrary, to give them every co-operation to prosecute with vigour an undertaking admitted to be important and necessary to the trade and commerce of Swansea. They further stated, that in the differences with the London directors, the directors had to contend with unprecedented difficulties, which they had surmounted, had saved the company from law expenses, in many instances had paid liabilities from their own private resources, and that they were entitled to the confidence of the shareholders. We have no doubt they are entitled to every confidence as to the pecuniary disbursements, but there is evidently a sad want of energy somewhere; for, with their Act of Parliament secure, and their land at command, what is there to hinder the enforcement of the payment of calls where necessary (and one or two examples would make others pay), and the active prosecution of the works proceeded with? This would have more effect than all the time for deliberation, which has hitherto been time wasted, and would bring about what they conclude, by recommending "that the shareholders, without regard to conflicting or personal interests, will do all in their power, both individually and collectively, to dispel the apathy and indifference of the leading manufacturers and landed proprietors surrounding this rising port, and to induce them to join in this enterprise—persuaded that all classes of the community will be equally benefitted by a measure which they consider indispensable to the progressive influence of the port and trade of Swansea."

During the discussion, a report was alluded to, which had gone abroad, that many of the London holders had been exonerated from payment of calls. The meeting were informed, however, that the committee had particularly enquired into this, and found the report entirely without foundation—not one holder having been exonerated. The report was then received and adopted; and it was resolved, "that this meeting conceives, that floating accommodation is imperatively demanded by the interests of Swansea; that, without it, the future prosperity of the port and town will be endangered, and its trade fail; and, therefore, this meeting is of opinion, that every exertion should be employed to forward the completion of the Swansea Docks, and that, for this end, an appeal should be made by the dock directors, at the earliest advisable period, to the landowners, gentry, and to the leading commercial and manufacturing firms of the town and neighbourhood, to take shares, and otherwise aid in promoting this object by every means in their power;" and "that public confidence in the dock undertaking can only be maintained by a rigid economy in every department, on the part of those entrusted with the management of this scheme."

We trust this resolution and recommendation will be boldly and energetically acted upon, and that steps be immediately taken for the prosecution and completion of a work of such importance to the town of Swansea, and which will prove, in connection with the railways now forming, of the greatest advantage to the entire metallurgical interests of the principality.

THE IRON TRADE.

A correspondent of the *Morning Chronicle*, writing from Dudley, says—"The anomalous condition of the iron trade, at the present time, creates very general interest in this neighbourhood. The writers in the metropolitan and provincial journals have, from time to time, within the last few years, pretty accurately chronicled its various vicissitudes, for, strange as it may appear, the changes in the state and prospects of this most important staple trade of the country alternate as frequently, if not more frequently, than even the prospects of the corn trade itself. Since the last quarterly meetings of the ironmasters, the exact position of the manufacture has been more than usually obscure. [In an article published in the *Mining Journal* of the 15th ult., this incongrous state of the trade was particularly referred to.] The ironmasters are not blameless in the matter. It cannot be concealed, that, possessed of extraordinary wealth, with an immense population dependant upon them for their support (although apprehensive of the evil consequences accruing from any resistance on the part of the workpeople), they still exact service without an overweening regard for the proportionate prosperity of the working population. The justice of the axiom, that just in proportion to the prosperity of the trade the workmen ought to participate in a fair share of profits, cannot be denied. I have no wish to precipitate any collision upon the subject of wages between masters and men, but still it cannot be gainsaid, that while in cases of depression wages have been reduced, they have not been correspondently increased when the prices of iron have been advanced. The history of South Staffordshire for the last few years will fully bear out this assertion. There may be reasons for this, but the masters are generally very chary in giving them.

The iron trade of the kingdom has, since the formation of railways, assumed an importance which, previous to that period, it did not possess. The immense demand for rails, and every other description of iron required in the manufacture of engines, other machinery, and the execution of railway enterprises, gave an impetus to the trade, and from which, even under somewhat adverse circumstances, it cannot altogether recede. In spite of all difficulties, new lines of railway will be obtained, tram lines will wear out, engines and carriages must be renewed, and a demand for iron, unknown before railways existed, must, in a degree, continue. Nor is this all the advantage which ironmasters gain by the substitution of railways for the old turnpike roads; for just in proportion as there is a greater demand for iron for railway purposes, will there be a corresponding firmness or increase in the price of iron required for articles of general domestic use. Now, at the present time, there does not appear to be a doubt entertained that the prospects of the iron trade are better than they have been for some time past, that orders have been declined at existing prices, that contracts for rails made at high rates have been resumed—in fact, there would appear to be every reason to justify an advance in the price of iron; and yet, at the meeting held at Dudley on Thursday last, it was resolved to adhere to the prices of last quarter. This is the more strange, as we were told when those prices were fixed, that they were not remunerative. To those uninitiated, this would seem to be an inexplicable enigma. The simple fact is, however, the ironmasters are fearful that the workpeople will, upon an increase of price, demand an increase of wages; and this, once granted, it will be difficult to reduce.

The decisions of preliminary or quarterly meetings of masters, from the immense competition at work, and the varied positions of the manufacturers, cannot, however, be absolutely relied upon as fixing, for the ensuing quarter, the price of iron. That price must, in the main, be arbitrary. The decision at Dudley has given dissatisfaction. In the course of the last few years, however formally and definitely prices may have been announced, a few weeks, nay, even a few days, have often been sufficient to show that the bond of union formed in the Birmingham Town Hall was but a rope of sand. Circulars, within a short period after the termination of the quarterly meeting, have been issued from many of the first iron houses, sometimes advancing, sometimes receding, from the prices then established. Should the trade look up, the affluent manufacturer will attempt an advance; should orders be slack and money scarce, the comparatively needy manufacturer will be ready at all times to make a sacrifice at prices under the quarterly meeting standard, to maintain his present credit. The decisions of quarterly days are, therefore, not to be depended upon as unalterable ruling prices; they are valuable chiefly as an index to the general bearing and tendency of the market. The great probability is, that even at the ensuing meetings the settled resolutions passed at Dudley will be set aside, and on the part of some houses a considerable advance be demanded.

Bad and ruinous as the mining interests of the district are sometimes represented to be, the coal-field of South Staffordshire is likely, at no distant period, to be immensely extended by the addition of the Sandwell estate. It is known that, for many years past, the Earl of Dartmouth has been engaged in testing the mineral qualities of his park; and, from a recent announcement, it would appear that the old and picturesque beauties of Sandwell will be shortly transformed into one vast district of collieries and coal stacks. This is the project said to be contemplated. Lord Dartmouth has purchased, as a residence, Patshall (lately belonging to Sir R. Pigott), situated between Wolverhampton and Bridgewater, and the ancient seat of the Legges is doomed to furnish fuel for the iron-works of South Staffordshire, and the noisy forges of neighbouring Birmingham. No one can blame the noble earl for his determination. The quiet rurality of Sandwell has, within these few years, been most unromantically broken in upon by mines and manufactures. It is no longer a desirable retreat for nobility; its future appropriation, while it will, in all probability, add considerably to the income of its noble proprietor, will at the same time confer great benefit upon the adjacent manufacturing population."

KING'S COLLEGE, LONDON—PRACTICAL GEOLOGY AND MINING.—A COURSE of about TWELVE LECTURES, on the PRACTICAL APPLICATIONS of GEOLOGY to ENGINEERING and MINING, by Professor D. T. ANSTED, F.G.S., will be COMMENCED on WEDNESDAY, October 4, at Twelve o'clock, and continued each succeeding Wednesday, at the same hour.
Fees for Attendance.....£1 11s. 6d.
R. W. JELF, D.D., Principal. 44

STEAM TO INDIA AND CHINA, VIA EGYPT.—Regular MONTHLY MAIL (steam conveyance) for PASSENGERS and LIGHT GOODS to CEYLON, MADRAS, CALCUTTA, PENANG, SINGAPORE, and HONG-KONG.
THE PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY
BOOK PASSENGERS and RECEIVE GOODS and PARCELS for the ABOVE PORTS by their steamers—starting from Southampton on the 20th of every month; and from Suez on or about the 10th of every month.
BOMBAY.—Passengers for Bombay can proceed by this company's steamers of the 29th of the month, to Malta, thence to Alexandria by her Majesty's steamers, and from Suez by the Honourable East India Company's steamers.
MEDITERRANEAN.—MALTA—On the 20th and 29th of every month. CONSTANTINOPLE—On the 29th of the month. ALEXANDRIA—On the 20th of the month.
SPAIN AND PORTUGAL.—Vigo, Oporto, Lisbon, Cadiz, and Gibraltar, on the 7th, 17th, and 27th of the month.
ITALY.—Genoa, Leghorn, and Civita Vecchia, at intervals of six weeks. The next vessel will leave Southampton at Two P.M. on Saturday, the 7th of October, 1848.
For plans of the vessels, rates of passage-money, and to secure passages, and ship cargo, apply at the company's offices, No. 122, Leadenhall-street, London; and 57, High-street, Southampton.

NOTICE TO SHIPPERS OF GOODS AND PARCELS, per PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY'S STEAMERS, to INDIA and CHINA.—GOODS and PARCELS sent direct to the company's parcel office, on or before 6 P.M., on the 17th of each month, are forwarded at less cost to shippers than when sent through any intermediate channel. Cases must not exceed 112 lbs. weight each, for Aden, Ceylon, Madras, Calcutta, and China; and 40 lbs. each case for Bombay. No package for India or China can, under any circumstances, be shipped at Southampton, unless it be cleared through the Custom-house, and placed alongside the steamer by noon on the 19th of each month.
Detailed particulars can be obtained on personal application, or by writing.
Parcel Department, 122, Leadenhall-street. 46

GENERAL TELEGRAPH COMPANY.—This company are now prepared to undertake the EXECUTION, by CONTRACT or OTHERWISE, of the most approved ELECTRIC, HYDRAULIC, PNEUMATIC, and MECHANICAL TELEGRAPHS.—Particulars of which may be ascertained by application at the company's temporary offices, 6, Gray's Inn-square, London.
FRANCIS WHISHAW, } General
NATHL. J. HOLMES, } Managers. 47

FOURDRINIER'S PATENT SAFETY APPARATUS, for PREVENTING ACCIDENTS IN MINES AND OTHER PLACES, WHEN THE ROPE OR CHAIN BREAKS.
By the ADOPTION of this INVENTION the LIVES of the WORKING MINERS may be PRESERVED, and the PROPERTY of the MINE OWNERS PROTECTED from the serious consequences of either of the following accidents—viz.:
1. From the men, or the load, being precipitated to the bottom of the shaft when the rope or chain breaks: in this case the apparatus is *self-acting*.
2. From either the men, or load, being drawn over the pulley: in this case, also, the apparatus is *self-acting*.
3. From the fearful consequences to men or load of a "whirl," or run: in this case the result is equally *certain*.
A COAL PIT, with the SAFETY APPARATUS ATTACHED to the CAGE, is daily at WORK near BURSLEM, in the STAFFORDSHIRE POTTERIES.
To inspect the apparatus, or to obtain any further information, application may be made Mr. Edward N. Fourdrinier (the patentee), Cheddleton, near Leek, Staffordshire; or Mr. Joseph Fourdrinier, 9, College-place, Camden Town, London—who are prepared GRANT LICENSES for the USE of the PATENT. 48

PATENT FLEXIBLE INDIA-RUBBER PIPES AND TUBING, for Railway Companies, Brewers, Distillers, Fire-Engines, Gas Companies, Gardening and Agricultural purposes, &c.
THE PATENT VULCANISED INDIA-RUBBER HOSE-PIPES are made to stand *hot liquor* and *acids*, without injury—do not become *hard* or *stiff* in any temperature (but are always perfectly flexible); and as they require NO APPLICATION of oil or dressing, are particularly well adapted for *Fire Engines, Pumps, Gas, Beer-Engines, Gardens*, and all purposes where a *perfectly Flexible Pipe* is required.
Made all sizes, from ¼-inch bore upwards, and of any length to order.
Vulcanised India Rubber Garden Hose, fitted with brass-taps, Copper branch and Rose's complete, ready to be attached to pumps, water-butts, or cisterns.
Sole manufacturer, JAMES LYNE HANCOCK,
Goswell Mews, Goswell-road, London.
N.B.—Vulcanised India-Rubber Washers, of all sizes, for joints of hot-water and steam-pipes, and *Vulcanised Sheet Rubber*, any thickness, for all kinds of joints, and other purposes 49

EMERSON'S PATENT LIQUID CEMENT.—This VALUABLE and ECONOMIC PAINT is READY FOR USE—is simple in its application, and only *one-sixth* the cost of *oil paint*; for beauty, it is pre-eminent over all other materials used on the fronts of houses—giving the exact appearance of FINE CUT STONE. It can be used at once on fresh Roman cement, or other plastering, and is particularly calculated for country houses, villas, or gate entrances that have become soiled or dingy, which can be at once beautified in any weather, at a mere trifling cost.
*** Sold in casks of 1 and 2 cwts., at 8s. and 15s. each. 50

PATENT MINERAL PAINT.
A brilliant black paint, invaluable as a coating for SHIPS' SIDES and BOTTOMS; also for all kinds of WOOD or METAL WORK, or the asphalte roofing felts, leaky roofs, spouts, and gutters, doors, sheds, railings, and all kinds of out-door work; and, being perfectly waterproof, will preserve their surfaces from atmospheric influence and decay; requires no preparation, and will dry in a few hours.—Price 2s. per gallon.
PATENT ASPHALTE ROOFING FELT, of the best quality, at 1d. per square foot, in pieces, 25 yards long and 32 inches wide.—GEORGE LEAR & CO., Sole Agents for the Patentees, 16, Basing-lane, Cheapside.

PATENT ALKALI COMPANY'S IRON PAINT.—This PAINT is the PRODUCT of a PATENT PROCESS, and possesses PECULIAR and VALUABLE PROPERTIES, not otherwise attainable.
Its colour (as at present produced) is a rich *purple-brown*. It is perfectly free from the deleterious qualities of white lead.
It surpasses all other paints ever yet discovered, in point of *durability* and *economy*.
Two coats of this paint are more than equal to three of any other description.
From its chemical composition, it is pre-eminently adapted for covering *iron*; also *wood*, and *stuccoed*, or *brick buildings*. The process by which the base of this paint is produced, makes it impossible that any change should take place in its composition from atmospheric influence. Its identity with iron secures it from galvanic action, so fatal to the durability of lead and other paints on iron work.
It has been exposed on shipping to the action of sea-water, and of the sulphuretted hydrogen, so prevalent in sea-ports and tidal harbours, for more than three years, without change.
Its *cheapness* and *strength* render it peculiarly suitable for *iron bridges, roofs*, and *railings, farm buildings*, and *shipping*. It will also cover creosoted timber.
Price, by the ton, £25, delivered in London, exclusive of packages.
Agents will be appointed for the principal towns in the United Kingdom; in the mean time, orders may be addressed to the offices of the company, No. 20, Fenchurch-street, London. JOHN A. WEST, Secretary. 51

UNDER BRITISH AND FOREIGN LETTERS PATENT.—Valuable INVESTMENT, by partnership or otherwise.—ABSORBENT and SOFT STONE INDURATED, rendered impervious to wet, frost, vermin, &c., and polished as high as marble, for all purposes.—CHALK, SAND, PLASTER, WOOD, CARTON-ROOF SHEETING, &c., treated equally as successful.
Established works, *à la Maladrérie*, near Caen, and at Tunbridge Wells, where order are executed much cheaper than other stone, &c.—Hutchison and Co.'s offices, Eas Temple Chambers, 2, Whitefriars-street, Fleet-street, London.
N.B.—LICENCES GRANTED. 52

PATENT GALVANISED IRON AND WIRE ROPE WORKS
MILLWALL, POPLAR.
ANDREW SMITH begs to inform the Mining, Railway, and Shipping interests, that he has obtained a PATENT for an IMPROVED METHOD of GALVANISING IRON, producing a much superior article at a considerable saving in cost—the improved process for galvanising wire rope, adding only £10 per ton instead of £20, under the ordinary processes. The rope is extensively used in damp situations, for mining and railway purposes, and for ships' standing rigging. 53

PATENT IMPROVEMENTS IN CHRONOMETERS, WATCHES AND CLOCKS.—E. J. DENT, 82, Strand, and 33, Cockspur-street, watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1836, 1840, 1842. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, from £8 to £10 extra. Gold horizontal watches, with gold dials, from 8 gs. to 12 gs. each.
DENT'S PATENT DIPLIEDOSCOPE,
or Meridian Instrument, is now ready for delivery.—Pamphlets containing a description and directions for its use 1s. each, but to customers gratis. 54

PATENTEES AND OTHERS REQUIRING ADVERTISEMENTS in the PROVINCIAL or LONDON PAPERS, &c., will MEET PUNCTUAL ATTENTION through the AGENCY of S. DEACON, 21, WALBROOK, where all the papers are filed from every country, and the *Times*, with other London newspapers, for upwards of 100 years past. Any of the provincial papers, as they arrive, may be seen at S. Deacon's Coffee-house, No. 3, Walbrook, on taking refreshment; also the *Mining Journal, Patent Journal, Mechanics' Magazine*, &c. 55

THE PATENT OFFICE AND DESIGNS REGISTRY, *No. 210, STRAND, LONDON.*
INVENTORS will receive (gratis), on application, the OFFICIAL CIRCULAR OF INFORMATION, detailing the eligible course for PROTECTION of INVENTIONS and DESIGNS, with Reduced Scale of Fees.
Messrs. F. W. CAMPIN and CO. offer their services, and the benefit of many Years' experience, in SECURING PATENTS and REGISTRATIONS OF DESIGNS, with due regard to VALIDITY, economy, and dispatch—assisted by scientific men of repute.
Also, in MECHANICAL and ENGINEERING DRAWINGS, whether connected with Patents, Railways, or otherwise, by a staff of first-rate draftsmen.
Application personally, or by letter, to F. W. Campin and Co., No. 210, Strand (corner of Essex-street). 56

Just published, Part I.,
COMBUSTION of COAL, CHEMICALLY & PRACTICALLY CONSIDERED. With coloured plates.
By CHARLES WYE WILLIAMS, Esq. 57
London: Simpkin, Marshall, & Co., and J. Weale—*Birmingham:* Wrightson & Webb.

RAILWAY AND OTHER IMPORTANT RECORDS, EFFECTUALLY PROTECTED FROM DAMP AND VERMIN.
Extract from the Appendix to the Second Report of the Commissioners on the Fine Arts.
"In 1839, I superintended the construction of a house, of three stories, on the Lac d'Enghein. The foundation of the building is constantly in water, about 19½ inches below the level of the ground floor. The entire horizontal surface of the external and internal walls was covered at the level of the internal ground floor with a layer of
SEYSSEL ASPHALTE,* 58
less than half an inch thick, over which coarse sand was spread. Since the above date, no trace of damp has shown itself round the walls of the lower story, which are, for the most part, painted in oil, of a grey stone colour. It is well known that the least moisture produces round spots, darker or lighter, on walls so painted. Yet the pavement of the floor, resting on the soil itself, is only about 2½ inches above the external surface of the soil, and only 19½, at the utmost, above that of the sheet of water. The layer of asphalte having been broken and removed, for the purpose of inserting the sills of two doors, spots, indicating the presence of damp, have been since remarked at the base of the door-posts."
The DIRECTORS of the SEYSSEL ASPHALTE COMPANY have much pleasure in recommending to the notice of ENGINEERS and ARCHITECTS the application of the ASPHALTE of SEYSSEL, as the *only effectual* mode of preventing damp in basement floors, and water from percolating through the ARCHES of a VIADUCT.
The arrangements of this company enable works of any extent to be executed with the greatest promptitude. I. FARRELL, Secretary.
SEYSSEL ASPHALTE DEPOT, STANGATE, LONDON.
ESTABLISHED 1838.
* This method has been adopted at the New Houses of Parliament.

LAP-WELDED IRON TUBES,
W. H. RICHARDSON, Jun., and CO.,
MANUFACTURE every description of WROUGHT-IRON TUBES, for Locomotive and Marine Boilers, Gas, Steam, and other purposes.
PATENT TUBE WORKS, 59
DARLASTON, STAFFORDSHIRE.

IMPROVED LIFTING JACKS,
MANUFACTURED BY
W. AND J. GALLOWAY,
PATENT RIVET WORKS,
MANCHESTER.
IMPROVED RATCHET JACK. HALEY'S PATENT LIFTING JACK.

*** The attention of parties who employ
Lifting Jacks,
is respectfully requested to the superiority of those annexed, over those hitherto in use. 60

GUTTA PERCHA.—BOOTS and SHOES, SOLED with this MATERIAL, being eminently non-conductors of heat, are exceedingly pleasant wear for tender feet, and however slight the soles, impenetrable by showers or salt-water—therefore, invaluable to SPORTSMEN, TOURISTS, and VISITORS to the SEA-SIDE. The idea that atmospheric heat has any detrimental effect upon Gutta Percha is a *fallacy*, and in no known instance have soles failed in adhering, which may not be ascribed to neglect of the company's printed directions. The more recent productions in Gutta Percha are elaborate cornices, highly enriched console tables, mouldings, panellings, picture-frames, &c., in every variety of finish and relief, dessert services, flower vases, fountains, inkstands, medallions, buckets, bowls, bottles, paper weights, pen trays, &c. Tubing of all sizes, from ¼th of an inch to 4 inches diameter. For lining cisterns, sinks, galvanic troughs and batteries, Gutta Percha offers innumerable advantages; and, being impervious to water, unaffected by acids, alkalies, &c., it may fairly be said to be the discovery of the age.—May be had of the GUTTA PERCHA COMPANY,
18, Wharf-road, City road, and of any of their wholesale dealers. 61

SIR W. BURNETT'S PATENT FOR THE PRESERVATION OF TIMBER, CANVAS, &c.
This PROCESS hardens and improves the texture of wood. It enters into permanent chemical combination with the ligneous fibre, and does not come to the surface of the wood by efflorescence, like other crystalliasable salts; and no amount of washing or boiling in water will remove the chemical compound so formed.
It PRESERVES WOOD and OTHER ARTICLES from the adherence of ANIMAL and VEGETABLE PARASITES, and also from the attacks of INSECTS.
It completely PRESERVES WOOD from WET and DRY ROT.
It renders the WOOD PERFECTLY UNINFLAMMABLE, when used of a certain requisite strength.—See Letter, dated
"*Admiralty, August* 14, 1845.
"SIR,—In reply to your letter of the 9th inst., with its inclosure from Sir William Burnett, I am commanded by my Lords Commissioners of the Admiralty to transmit to you, for the information of Lord Stanley, a copy of a report from the officers at Portsmouth Yard, upon the effects of his solution, applied to the purpose of preventing ignition in timber, or, rather, to prevent it breaking into flames. In consequence of that report, my Lords have ordered the bulk-heads in the holds and magazines in her Majesty's ships to be fitted with timber so saturated, and it is also applied largely to the various buildings in her Majesty's dockyards.
"I send, for Lord Stanley's further information, a copy of a statement of the price per load of preparing timber for building purposes.
"G. W. Hope, Esq., &c, &c." (Signed) "W. A. B. HAMILTON. Secretary.

ITS EFFECTS ON CANVAS, CORDAGE, COTTON, &c.
The preparation preserves these articles from mildew and rot. It renders them more pliable; does not in the slightest degree discolour them; and washing or boiling in water will not remove the combination from their fibres.
Further information may be obtained, specimens seen, and special terms entered into, when the quantity of materials to be Burnettised is large, on application to
Mr. JACKSON, Secretary,
AT THE OFFICES, 53, KING WILLIAM-STREET, LONDON-BRIDGE. 62

STEPHENS'S DYES FOR STAINING WOOD as a SUBSTITUTE FOR PAINT—For DECORATING CHURCHES, LARGE PUBLIC ROOMS and THEATRES, as well as PRIVATE DWELLINGS, giving the effect of oak, mahogany, or satin wood.
When economy in expenditure of material and time is of importance, these dyes will be found of the greatest advantage, as they give a rich colour to plain woods, while they reflect all the beauty of the natural graining, which is so superior to imitations by art, and, at the same time, avoid the disagreeable smell and deleterious consequences of paint.
The DYES, or STAINS, are prepared and sold by HENRY STEPHENS, 54, Stamford-street, Blackfriars-road, London, in bottles of 6d. and 1s. each, and at 8s. per gallon.—They may be obtained in powder at 8s. per lb., which dissolves in water to form the liquid, and 1 lb. will make one gallon of grain. Sold also at the office of *The Builder*, 2, York-street, Covent-garden, London; also, by Hopkins and Purvis, Greek-street.
N.B.—The trade supplied. 63
Also his COMPOSITIONS FOR WRITING WITH STEEL PENS.
STEPHENS'S WRITING FLUIDS compose the most splendid and durable colours, and the most indelible compositions which art can produce. They consist of—
A BLUE FLUID, changeable into an intense black colour.
PATENT UNCHANGEABLE BLUE FLUIDS, remaining a deep blue colour. Two sorts are prepared—a light and dark blue.
A superior BLACK INK, of the common character, but more fluid.
A superior CARMINE RED, for contrast writing.
A liquid ROUGE CARMINE, for artists and contrast writing, in glass bottles.
A carbonaceous RECORD INK, which writes instantly black, and being proof against any chemical agent, is most valuable in the prevention of frauds.
A liquid MECHANICAL and ARCHITECTURAL DRAWING INK, superior to Indian Ink.
MARKING INKS for linen; select STEEL PENS; INKHOLDERS.
Prepared by the inventor, HENRY STEPHENS, 54, Stamford-street, Blackfriars-road, London; and sold by all booksellers and stationers everywhere,
In Bottles, at 1d., 2d., 3d., 6d., 1s., and 3s.

PROFESSIONAL LIFE ASSURANCE COMPANY, Connecting the Clerical, Legal, Military, Naval, and Medical professions, and holding out advantages to the public not hitherto offered by any similar institution.
Incorporated.—Capital £250,000.
Established upon the mixed, mutual, and proprietary principle. 64
Rates essentially moderate.—Every description of policy granted. Immediate, survivorship, and deferred annuities; and endowments to widows, children, and others.—Every policy (except only in cases of personation) indisputable.—The assured permitted to go to and reside in Canada, Nova Scotia, New Brunswick, Australasia, Madeira, Cape of Good Hope, and Prince Edward's Island, without additional premium.—Medical men remunerated for their reports.—Loans granted on real or personal security.—One-tenth of the entire profits appropriated for the relief of the assured while living, and of his widow and orphans.—Annuities granted in the event of blindness, insanity, paralysis, accidents, and any other bodily or mental affliction, disabling the parties. Persons of every class and degree admitted to all the advantages of the corporation.—Rates for assuring £100 at the age of 25, 35, 45, and 55, respectively—namely, £1 14s. 6d., £2 5s. 6d., £3 4s. 3d., and £4 18s. 6d.
Prospectuses, with full details, may be had at the office.—Applications requested from parties desirous of becoming agents. EDWARD BAYLIS, Actuary and Secretary.
Offices, 76, Cheapside, London

MECHANICS' MAGAZINE—PART CCCVIII—October 1,
Price 1s. 3d.—PRINCIPAL CONTENTS:—Maudslay's Self-Acting Stern Propeller and Archimedean Boiler Furnance—Lloyd's Blowing Machines—Mc'Conochie and Claude's Locomotive Engine—Fraser's Electro-Motive Engine—Wallace's Golden Glass Letters and Tablets—Orsi's Ornamental Tiles—Shuldham's Diving Bell—Moor's Plan of Firing Shells by Electricity—Bentham's Buoyant Foundations for Sea Walls—White's Drain Cutting System—Egan's Cheap Railways for India—The Patent Portland Cement—Employment of the Electric Telegraph to determine differences of Longitude—Insulation of Electric Wires by Gutta Percha—Clarke's Acoustic Telegraph—The Sea Wall Question.—Mathematical Papers by Professor Davies, Professor Young, Mr. Boole, &c.—Reviews, Notes, and Notices—Lists of New Patents and Designs, &c., &c.
"The *Mechanics' Magazine* has conferred lasting advantages on the manufactures of the country."—*Report of Select Committee of the House of Commons on the Arts of Design.*
Mechanic's Magazine, Patent and Designs Registration Office, 166, Fleet-street. 65

London: Printed by RICHARD MIDDLETON, and published by HENRY ENGLISH (the proprietors), at their offices, No. 26, FLEET-STREET, where all communications are requested to be addressed. [*October* 7, 1848.